

January 17, 2008

Mr. John Barna  
Executive Director  
California Transportation Commission  
1120 N Street, Room 2233, MS-52  
Sacramento, CA 95814-5605

Dear Mr. Barna,

As you know, many of the Regional Transportation Planning Agencies (RTPAs) in Northern California have been working together to develop a Northern California Trade Corridors Strategy. Led by the Metropolitan Transportation Commission, Sacramento Area Council of Governments (SACOG), and many of the Councils of Governments in the Central Valley, the coalition is now supported by 23 of the state's 58 counties, bridging the north-south and urban-rural divide.

The regional agencies in Northern California have worked together to develop a strategic vision, coupled with a specific program of projects, to address the growing needs of goods movement in Northern California. Trade primarily occurs along two major trade corridors in the North: the Central Corridor and the Altamont Corridor, which taken together connect the Sacramento, Bay Area, and Central Valley regions with one another and with major national and international trade routes. The locus of this trade activity is the Port of Oakland, the nation's 4th busiest container seaport and a critical export port for the state. Because of the nature of goods movement and the interregional corridors being discussed, it is critical to work collaboratively across jurisdictional boundaries. This foundation will also serve to advocate for Northern California's needs beyond the Infrastructure Bond, extending particularly to the next round of federal transportation reauthorization.

We believe that the comprehensive draft program of projects we've developed would greatly improve goods movement throughout Northern California and indeed the entire state, creating a more efficient and resilient transportation system and supporting the state and regional economies. The partnership leader in the Bay Area, Sacramento and Central Valley have formed for TCIF is unprecedented. By working together to develop a program of projects that will improve goods movement along the major Northern California trade corridors, the regions have taken critically important steps to acknowledge the interconnectedness of our goods movement systems.

The Donner Summit and Tehachapi Pass Improvements are gateway projects of statewide significance located within Northern California. We included these projects in our trade strategy with the understanding that the State will take a lead role in negotiating with the railroads the public benefits associated with the final Projects, with input from key regional partners.

Given the diversity of interests in Northern California, and the State's concerns that those interests are effectively marshaled in this important effort, we want to assure you of our collective commitment to deliver a timely and responsive Northern California Trade Program. We look forward to working with the California Transportation Commission and our other state partners on TCIF Program development and delivery.

Please see the attached signatures.

Signed by:



Therese McMillan, Deputy Executive Director  
MTC



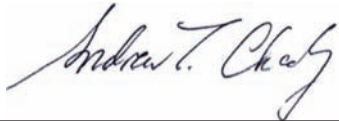
METROPOLITAN  
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COMMISSION



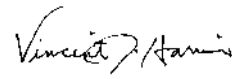
Michael McKeever, Executive Director  
Sacramento Area Council of Governments



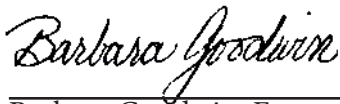
S A C O G



Andrew Chesley, Executive Director  
San Joaquin Council of Governments



Vincent Harris, Executive Director  
Stanislaus Council of Governments



Barbara Goodwin, Executive Director  
Council of Fresno County Governments



Ronald E. Brummett, Executive Director  
Kern Council of Governments



Jesse Brown, Executive Director  
Merced County Association of Governments



Ted Smalley, Deputy Executive Director  
Tulare County Association of Governments



Terri King, Executive Director  
Kings County Association of Governments



Patricia Taylor, Executive Director  
Madera County Transportation Commission



# **NORTHERN CALIFORNIA TRADE STRATEGY**

## **OVERVIEW**

Goods movement has become an increasingly important issue in Northern California. As international trade continues to grow, all of California's trade gateways are feeling the burden. High volumes of international cargo, as well as goods needed to serve the growing population and support the local and state economies are placing a strain on the overburdened and often outdated infrastructure. The impact can be seen not only in delays for cargo, but congestion on the region's highways, rail lines, and local roads. In addition, high levels of air pollution, safety concerns, local congestion and noise have disproportionately impacted those communities located near goods movement infrastructure.

The goods movement transportation system is a complex network including ports, rail facilities and rail lines, and highway and roadway infrastructure, and is closely tied to state, national and international transportation systems. As such, it is critical to think of goods movement in terms that extend beyond our typical geographic and political boundaries.

In Northern California, critical goods movement corridors connect the Bay Area, Sacramento and Central Valley regions. This was reflected in the State's Goods Movement Action Plan (GMAP), which showed the Bay Area and Central Valley Regions overlapping significantly. While the Bay Area, Sacramento and Central Valley all have very distinct characteristics, the regions are inextricably linked in terms of goods movement.

Trade primarily occurs along two major trade corridors in Northern California: the Central Corridor and the Altamont Corridor, which taken together connect the major regions with one another and with critical national and international trade routes. The locus of this trade activity is the Port of Oakland, the nation's fourth busiest container seaport and a critical export port for the state.

- **The Central Corridor** is a highway and rail corridor running from the Port of Oakland roughly along I-80 to Sacramento and across the Sierra Nevada Mountains on to Chicago, connecting the Bay Area and Sacramento regions with one another and the major transcontinental highway and rail routes heading out of Northern California.
- **The Altamont Corridor**, which runs from the Port of Oakland, along I-880/238/580 to the Central Valley, connects with I-5 and SR 99 at the northern end of San Joaquin Valley and eventually with the southern transcontinental rail route at the southern end of the Central Valley. This corridor connects the State's agriculture community and the Port of Oakland and also serves the growing population of the Central Valley.

Investment in these corridors together focuses on the dual goods movement concerns of: (1) the economic interconnections of the Sacramento and Central Valley regions with the Bay Area through interregional goods distribution corridors; and (2) ensuring the future viability and growth of the Port of Oakland as a trade gateway for both imports and exports. Recognizing the importance of these two factors, regional transportation agencies in Northern California have formed a partnership to develop a comprehensive program of rail and highway projects along these two trade corridors. This integrated program is designed to meet current and future requirements to move both people and goods throughout the state and the nation quickly, reliably and safely, with less highway congestion and pollution.

## **TCIF Program**

The regional agencies have come to consensus around a list of priority goods movement investments in Northern California to be nominated for the Trade Corridors Improvement Fund (TCIF). The list is multimodal— addressing a network of rail, highway and maritime improvements— and multiregional, focusing on the Central and Altamont Corridors. The program

consists of targeted, strategic investments in rail and highway infrastructure providing access to the Port of Oakland, and networking with other ports serving Northern California trade corridors, to provide a balanced, multi-modal approach to goods movement. Because the long-term needs in Northern California, and throughout the state, far outweigh the current funding available, the regional agencies took a phased approach to developing the list of priority goods movement projects for Northern California (**See Attachment 1**). The first Tier, totaling approximately \$960 million, reflects the highest priority projects for each region. Tier 2, totaling \$470 million, is made up of those projects that play an important role in goods movement in the corridors but that we do not believe should be recommended for the TCIF program. The more than \$2 billion provided by the bond is simply the beginning of a long-term focus on goods movement. With federal reauthorization on the horizon, and a possible revenue stream for trade projects coming from the proposed container fee being considered by the Legislature and the major ports, those projects that do not receive funding from TCIF will continue to be developed and pursued. All projects listed in Tier 1 and submitted for the TCIF program can be in construction by December 31, 2013, and have the required match secured.

## **CORRIDORS**

### **PORT OF OAKLAND**

In Northern California, the Port of Oakland serves as a major anchor of goods movement activity, handling 99% of the waterborne goods moving through Northern California and supporting the regional population, Northern California businesses and the State's critical agricultural community. The Port of Oakland is the fourth largest container port in the country, handling almost 2.4 million twenty-foot equivalent units (TEU) in 2006. Unique among California ports, container volume at Oakland is split almost evenly between import and export movements. Oakland is the primary California gateway for Central Valley agricultural and Northern California wine country exports, and for both import and export goods coming into distribution centers and warehouses located in the northern San Joaquin Valley. Maritime activity at the Port's 20 deepwater berths and nearly 770 acres of marine terminals generates over 28,500 jobs, \$3.7 billion annually for the regional economy, and over \$200 million in local and state tax revenue.

International trade volumes continue to grow on the west coast. The demand that is driving the cargo growth in the Port comes from several sources: expanding urban markets reaching south toward Gilroy and east into the Central Valley; and development of inland transload warehouse centers as far away as Bakersfield that will rely on the Port as an international gateway. The Port anticipates continuing to grow at four to five percent annually, reaching between five and six million TEUs around 2020- 2025.

However, west coast port capacity and infrastructure development have not kept pace with demand. Increased congestion at the San Pedro Bay ports and along Southern California intermodal routes have led the railroads and shipping industry to evaluate multiple routing options. They are increasingly recognizing the Port of Oakland as a desirable strategic load center for U.S. intermodal cargo. Shippers can achieve logistics benefits by combining cargo destined for local consumers with intermodal cargo headed to and from the rest of the nation.

The Port has almost completed deepening its channels to accommodate newer, larger vessels, and has expanded its marine terminals in order to create more capacity within the Port. The Port is ready to accept more business and has room to grow as the volume of international trade increases over the next several years. To realize this growth potential, however, the Port needs to increase the capacity of the freight rail system that connects the Port to the rest of California and the nation.

### **Port of Oakland TCIF Anchor Projects**

Both the Central and the Altamont Corridors are anchored at the Port of Oakland. In order to accommodate the forecast growth anticipated at the Port, key rail and road infrastructure improvements are needed to provide access to and from the Port of Oakland. The Port's highest

priority for ensuring its future economic health is to expand the capacity of the main rail lines serving the Port and points east. There are three major projects located at or near the Port of Oakland that are critical projects for both the Central and Altamont Corridors: expanded intermodal capacity at the Outer Harbor Intermodal Terminals (OHIT), the 7<sup>th</sup> Street Grade Separation, and Martinez Subdivision Improvements.

- OHIT: OHIT is the extension of two intermodal rail yards, which will be located on the former Oakland Army Base and provide significant goods movement capacity at the Port. The project will allow the railroads to load and unload containers more efficiently, and will support the Port of Oakland's intermodal throughput goal. OHIT will relieve congestion on rail main lines adjacent to the Port and will provide air quality benefits for the region and State by providing the capability to move more goods by rail rather than by trucks.
- 7<sup>th</sup> Street Grade Separation: The project will relieve a key highway and rail bottleneck at a major gateway into the Port of Oakland. The grade separation will separate truck traffic on 7<sup>th</sup> Street from increased rail movements between OHIT and the rail mainline to the north of 7<sup>th</sup> Street and the existing rail facilities to the south. This will eliminate conflicts between trucks and trains at a major intersection adjacent to OHIT and a major entrance to the Port.
- Martinez Subdivision Improvements: The Martinez Subdivision is the primary rail line serving the Port of Oakland. Running north from the Port and connecting with the major north-south and east-west rail routes in the State, Martinez is owned by Union Pacific (UP), and used by UP, Burlington Northern Santa Fe (BNSF) and the Capitol Corridor, San Joaquin and Amtrak services. Improvements here will add much needed capacity and operational flexibility to the mainline, improving the velocity, throughput and reliability of both freight and passenger service on this congested rail segment.
- The 7<sup>th</sup> Street and OHIT projects together create the capacity to move more trains with fewer delays into and out of Oakland, reducing the conflicts between trucks and trains and making rail service more efficient. The projects also create operational synergies with the Martinez Subdivision Improvements, which as proposed will take place directly north of the OHIT facility as goods exit the Port.

## **CENTRAL CORRIDOR**

The Central Corridor is an integrated rail and highway corridor that stretches from Oakland to Chicago, providing a critical link between Northern California and the rest of the nation. It crosses through eight counties, including Alameda, Contra Costa, Solano, Sacramento, Yolo, Placer, Nevada, and Sierra Counties. The corridor is comprised of highway and rail facilities. I-80 is the primary east-west highway connector between the Bay Area and Sacramento. I-80 extends northeast from the Bay Area approximately 200 miles through Sacramento and over Donner Summit, where it crosses into the State of Nevada. This corridor is the only major freeway connection between Northern California and points east.

Rail service along the Central Corridor is provided primarily by UP. This rail line extends from the UP Railport and the Port of Oakland's Oakland International Gateway (OIG) intermodal yard, 100 miles east to the UP Yard in Roseville. The Roseville Yard is UP's major carload classification yard in Northern California, receiving daily trains from Los Angeles, Oakland, the Central Valley, Chicago, Kansas City and the Pacific Northwest. East-west movements continue along the UP line along I-80 over Donner Summit and points east, and north-south movements connect with UP's north-south line between Seattle and Los Angeles along I-5. BNSF also runs a limited number of trains along this same infrastructure under a trackage rights agreement.

In addition, the Central Corridor is a major passenger rail route, with a weekday average of 44 passenger trains traveling along the corridor. The Capitol Corridor service runs 32 trains per day between Sacramento and the Bay Area, and Amtrak and the San Joaquins run an additional 12 per day. Due to the capacity issues, Capitol Corridor trains are often delayed, sometimes in

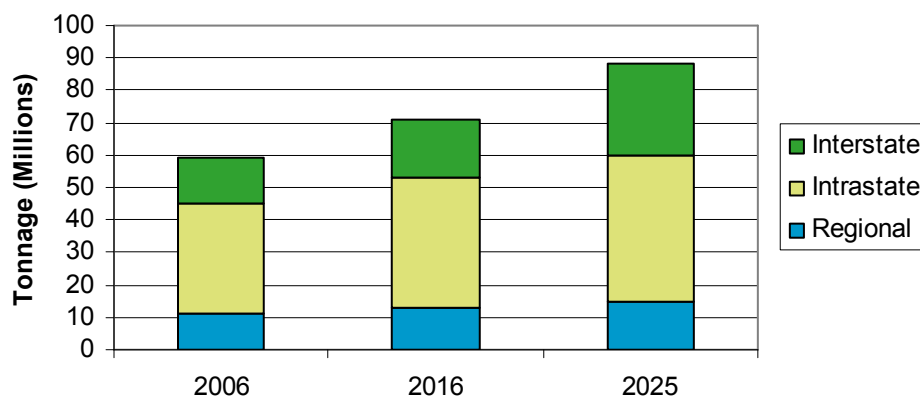
excess of two hours, between Sacramento and Oakland. This leads to a fairly high degree of unreliability for rail passengers and reduces the attractiveness of the service to commuters.

The rail system along this Corridor generally does not have excess capacity. There are several sections with heavier rail activity than is optimal, including the UP mainline north of Oakland, the Martinez Subdivision, used by both freight and passenger trains. There are three major rail choke points along the Central Corridor where capacity issues or operational constraints limit the free flow of freight. These choke points impede the amount of freight that can be brought through the Port of Oakland and result in congestion along the entire subdivision, which runs through multiple residential and commercial areas in the Bay Area and Sacramento. In addition, there is significant interest in extending passenger rail service east of Sacramento, which must be negotiated with UP and is a top priority for the Sacramento area. The primary rail choke points are:

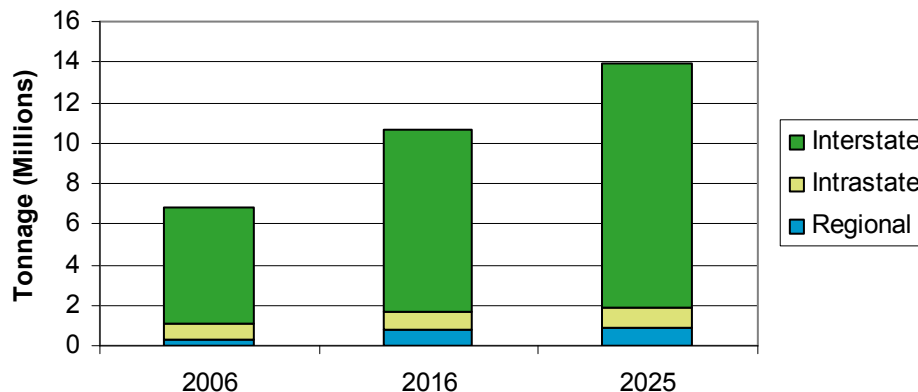
- **The Martinez Subdivision:** Currently, this mainline segment is used by Amtrak, UP, the Capitol Corridor, and BNSF. The conflict between passenger and freight trains is limiting the capacity to move freight trains away from the Port. In addition, there is very limited capacity to store trains prior to departure or after arrival.
- **Donner Summit:** The ability to move freight from the Port of Oakland is limited by the tunnels over Donner Summit, which do not provide sufficient clearance for double-stacked container cars, as well as a critical section of the line where the track is reduced from two tracks to one. The Donner Summit is a key gateway for the state of California, providing access to the rest of the nation via the transcontinental rail line.
- **Sacramento Rail Depot:** The current track configuration requires passenger trains to stop on the mainline, requiring freight trains to wait for loading and unloading of passengers. This situation also creates a safety problem with passengers having to cross live tracks and results in a speed limit of 20 mph on this section.

The forecasts for the Central Corridor call for a considerable increase in the tonnage and value of commodities carried by truck and by rail. By 2016, the total of the regional, intrastate, and interstate (including Mexico and Canada) goods movement along the corridor is projected to grow to 90 million tons annually, and be valued at \$101 billion. By 2026, the total goods movement along the corridor is projected to grow to 112 million tons annually, with a total value of \$126 billion. The cumulative growth in tonnage for the Corridor is shown for trucks in Figure 1A and for rail in Figure 1B, which also clearly show how trucks provide the majority of the intrastate moves, while rail provides primarily interstate freight movements.

**Figure 1A Central Corridor Truck Tonnage Growth, 2006 to 2025**



**Figure 1B Central Corridor Rail Tonnage Growth 2006-2025**



This growth can be estimated in terms of increased truck and rail flow along the corridor. For the Central Corridor, a rough calculation of tonnage per truck yields a measurement of 28,000 pounds per truck (roughly 14 tons per truck). By 2016, the total truck tonnage is projected to grow to 71 million tons. This will add an estimated 5 million additional trucks to the road yearly, or an average of 15,315 each day. By 2026, the truck tonnage is projected to grow to 88 million tons, or an additional 6.3 million trucks per year or 19,062 trucks per day. Rail freight is projected to grow at a slightly slower rate. Nevertheless, the tonnage carried by rail is expected to grow to 11 million tons by 2016, and 14 million tons by 2026. Strategic investments in the rail network may encourage more goods to move by rail rather than by truck in the future.

#### Highway Bottlenecks

I-80 is a notorious highway bottleneck in the Bay Area, with two of the most congested segments in the region. This is also the case in the Sacramento metropolitan area, where it serves as the major commute route as well as a major goods movement corridor for both regional and interregional freight. Bottlenecks occur at the I-80/680/Hwy 12 interchange, as well as along I-80 in Alameda County. In the Sacramento area, major congestion occurs during commute hours, as well as on weekends and holidays with recreational travel to the Sierra. While significant work is underway to improve I-80, there are limited opportunities along the geographically constrained corridor. Investing in the rail network in the corridor, as well as strategic investments in the highway corridor, can potentially reduce the volume of trucks on the highway network.

#### Central Corridor TCIF Projects

Projects recommended for TCIF funding on the multi-modal Central Corridor include a mix of highway and rail projects, as well as one dredging project. Together, the projects expand capacity in the corridor and remove key highway and rail bottlenecks.

- Donner Summit Improvements: Targeted investments over the Donner Summit will allow for double-stacked, longer trains to traverse Donner Summit, rather than having to travel the circuitous route over Feather River Canyon which double-stacked trains originating at the Port of Oakland use today. These improvements will improve the capacity, velocity and throughput of the Central Corridor, cutting nearly a day off the travel time for a train heading to or from the Bay Area from points east.
- Sacramento Rail Depot Realignment: Realignment of the mainlines through the Sacramento Valley station will allow for a 50 percent increase in velocity of freight trains through the station. Current track configurations create congestion and safety issues. The realignment will provide for the separation of all passenger tracks/platforms from freight train operation as well as grade-separated access to the passenger platforms without crossing any live tracks. Realignment of the main tracks will include replacement of the existing passenger boarding platforms, platform access, and other related facilities.

- Reconstruction of the Cordelia Truck Scales. The truck scales were constructed in 1958 and are seriously undersized and unable to process existing truck volumes, much less projected volumes. Inefficiencies at the current facility frequently result in trucks queuing on to the interstate, creating dangerous weaving conditions and forcing the scales to periodically close. New, relocated truck scales will improve throughput and safety in the area for both trucks and passenger vehicles.
- Port of Sacramento Dredging: Dredging the remaining 35 miles of the Sacramento Ship Channel from 30 to 35 feet will result in a 40 percent increase in the potential berthing capacity for the Port of Sacramento. This will allow larger and more modern vessels to serve the Port, and thus would probably lead to a reduction in truck trips between the Bay Area and the Sacramento region.

When considering the long-term future of the Central Corridor, additional improvements to the rail, highway and waterway network will be needed. Sustained infrastructure investment will be needed along the rail mainline from the Bay Area to Sacramento. Ranging from track upgrades to providing additional sidings and ties to upgrading drainage and replacing worn track, ongoing investment in the corridor will improve the operational efficiency of the rail corridor. However, these improvements are not as high a priority as those recommended for TCIF funding.

There are also a number of highway projects in development along the corridor, including a new interchange at I-80/680/12, which is a high priority for Solano County and will complement the Cordelia Truck scales project. In addition, improvements to I-80 in the Sacramento region include extending the existing HOV lanes from Watt Avenue west to I-5 and from the Sacramento/Placer County line west to SR 65.

Barge service is also being contemplated between the Port of Oakland and the Port of Sacramento (as well as the Port of Stockton). However, given the current projected cost structure of the service and the infrastructure investment needed upfront, barge service is considered a long-term strategy for the corridor.

### **ALTAMONT CORRIDOR**

The Altamont Corridor is an interregional corridor serviced by highway and rail infrastructure. Originating in the Bay Area along I-880, SR 238 and I-580, the Altamont Corridor traverses east through Alameda and San Joaquin Counties on I-205 before reaching I-5 approximately 65 miles east of Oakland. This is a very high volume truck traffic corridor linking the Central Valley distribution centers and the Bay Area. It is the primary link for agriculture products traveling throughout the Central Valley and from the Central Valley to the Port of Oakland for export to the rest of the world. The Altamont Corridor continues south through the Central Valley along I-5 and SR 99, providing a critical north-south link through the heart of California. According to the Federal Highway Administration, the Altamont Corridor highway system will more than double in truck volume activity between 1998 and 2020.

### **The Central Valley**

The Central Valley of California and its relationship with the Altamont Corridor connecting the Central Valley to the Bay Area is logistically one of the most important trade corridor combinations supporting the movement of goods on a local, state, national, and international level. The Central Valley includes both the Sacramento region and the San Joaquin Valley, and was itself a major region identified in the State's Goods Movement Action Plan (GMAP). The San Joaquin Valley portion of the Central Valley includes the eight counties of Kern, Kings, Tulare, Fresno, Madera, Merced, Stanislaus, and San Joaquin.<sup>1</sup> Geographically, it connects the two

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<sup>1</sup> See *San Joaquin Valley Goods Movement Action Plan*, November 30, 2007



largest metropolitan areas in California, San Francisco and Los Angeles, as well as the Greater Sacramento region.



Eight of the ten fastest growing counties in California are located in the Central Valley. The counties of Merced, Stanislaus, and to a large part San Joaquin, are bedroom communities for the Bay Area, with over 20 percent of residents from San Joaquin County commuting daily over the Altamont Trade Corridor.

As an air basin, the San Joaquin Valley is designated by the Environmental Protection Agency as a non-attainment area. Residents rank among the highest 5% in the nation for pollution-related health risks. Significantly contributing to the air quality condition is the amount of pollution emitted from diesel trucks. In fact, according to the California Air Resource Board, the San Joaquin Valley has the highest heavy-duty diesel truck miles per day in the state.

The major goods movement routes are I-5 (primary north-south route for freight movement along the west coast from Canada to Mexico), SR 99 (primary inland route through California connecting major cities in the San Joaquin Valley) and the Class I railroad lines owned by UP and BNSF. East to west transportation facilities are less numerous but critical to the interregional transportation network of the west coast and the western United States. The Port of Stockton in San Joaquin County is located on the deepwater ship channel 75 nautical miles due east of the Golden Gate Bridge. It is the largest inland port on the west coast, the largest tier II port in California and trades with over 50 nations specializing in bulk commodities. The Port's maritime volume is expected to double in the next ten years.

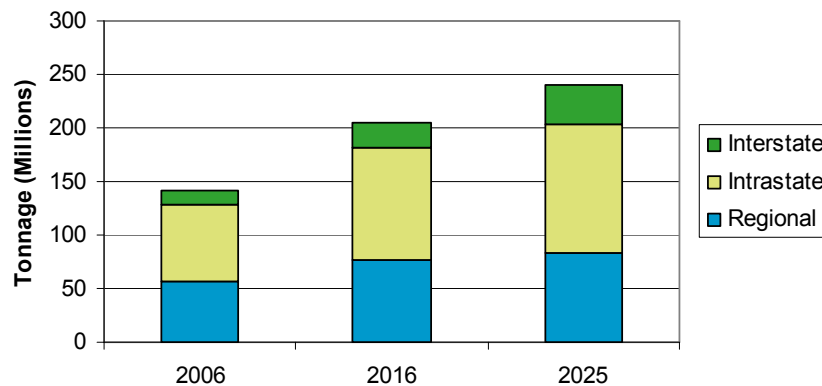
Busiest Trucking Corridors		
Region	Heavy-duty diesel truck miles per day	Smog violations in 2006
San Joaquin Valley	11.6 million	86
South Coast	9.6 million	85
San Francisco	2.9 million	12
San Diego	1.5 million	14

The southernmost Central Valley county of Kern is the gateway to the Altamont Trade Corridor. This corridor provides north/south rail access between the Bay Area, the Central Valley, and Southern California and is a primary access route to the southern transcontinental rail network. In the north, San Joaquin County is considered an interregional goods movement hinge point for California due to its close relationship with the Bay Area and the Greater Sacramento Area. The majority of interregional goods movement from the Central Valley heads west over the Altamont Pass on I-580 into the Bay Area on I-580, I-238 and I-880, or continues north through Sacramento or to the east over the Donner Pass/I-80.

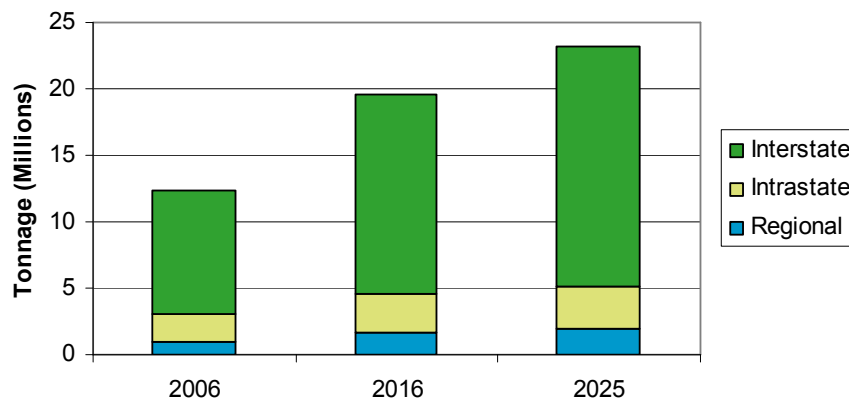
Two different rail lines provide rail service along the Altamont Corridor. The primary line is the BNSF mainline, which begins at the Port of Oakland's BNSF OIG terminal, travels north along the UP owned Martinez Subdivision, before traveling roughly 65 miles east, where it connects to the BNSF Stockton Intermodal Facility. BNSF trains then head south through the Central Valley and over the Tehachapi Mountains, where they connect with the southern transcontinental rail lines. The second rail line is the UP-owned Niles Rail Corridor, which starts at the Port of Oakland traveling south, and heads east over Altamont Pass. At Niles, the line joins the UP line from San Jose, and continues to Stockton. The portion between Stockton and San Jose is used by the Altamont Commuter Express (ACE).

The forecasts for the Altamont Corridor call for a considerable increase in commodity flows. By 2016, the total of the regional, intrastate, and interstate (including Mexico and Canada) goods movement along the Altamont Corridor is projected to grow to 250 million tons annually, and be valued at \$183 billion. By 2026, the total goods movement along the Altamont Corridor is projected to grow to 292 million tons annually, with a total value of \$214 billion. The cumulative growth in tonnage for the Corridor is shown for trucks in Figure 2A and for rail in Figure 2B. These graphs also clearly show how trucks provide the majority of the intrastate moves, while rail provides primarily interstate freight movements.

**Figure 2A Altamont Corridor Truck Tonnage Growth, 2006 to 2025**



**Figure 2B Altamont Corridor Rail Tonnage Growth, 2006 to 2025**



This growth can be estimated in terms of increased truck and rail traffic along the corridor. For the Altamont Corridor, a rough calculation of tonnage per truck yields a measurement of 14 tons per truck. By 2016, the truck tonnage is projected to grow to 204 million tons. This will add an estimated 14.5 million additional trucks to the road yearly, or an average of nearly 44,000 trucks each day. By 2026, the truck tonnage is projected to grow to 239 million tons, or an additional 17 million trucks per year or 52,000 trucks per day.

#### Rail Bottlenecks

There are several choke points along the Altamont Corridor where the free flow of freight is limited by capacity issues and operational constraints. These choke points are of high interest to the Port of Oakland, because they impede the connection between the Port and the rest of

California, specifically the Central Valley distribution centers and agricultural exporters. There is not adequate rail connectivity between the Port and the inland Central Valley. Therefore, most of this freight is carried by truck on the Altamont Corridor, adding to congestion and air quality concerns along the corridor. A major rail bottleneck is located at the Niles Junction near Fremont due to conflicts between the eight daily ACE trains with the UP freight traffic. Another major rail bottleneck exists at the Tehachapi Mountains, where difficult terrain and high volumes result in slow moving trains, frequent mechanical problems and operational inefficiencies. This is a key state gateway providing goods movement connections within California as well as to the major national markets. Without investment over the Tehachapi Mountains, the rail network will reach capacity by 2009.

#### Highway Bottlenecks

Critical highway bottlenecks occur in multiple locations along the Altamont Corridor. In 2005, the I-580 corridor daily traffic volume was 211,000 vehicles per day with trucks accounting for 12 percent of the total traffic. This I-880/238/580 route has the highest truck volumes of any location in the Bay Area and serves as the major interregional corridor between the Port of Oakland and I-5 in the Central Valley. It also serves the Tri-Valley area including the cities of Pleasanton, Dublin, and Livermore. Two segments along the corridor have been in the top five most congested freeway locations in the Bay Area since 2002, experiencing three-hour long weekday and morning peak period congestion in the westbound direction and four-hour long weekday afternoon peak period congestion in the eastbound direction. In particular, the geographically challenging Altamont Pass is a major chokepoint for both passenger vehicles and freight as trucks struggle to climb the grade.

Immediately to the east, I-205 experiences chronic congestion with peak periods lasting three plus hours and regularly recurring congestion on weekends. In addition, SR 120 and SR 99 also operate above their peak period capacity. The primary highway access linking I-5 and SR 99 to the Port of Stockton is the Crosstown Freeway (SR 4). This facility stub ends as it approaches the Port, forcing trucks onto the Boggs Tract residential community surface streets in order to access the Port.

#### Altamont Corridor TCIF Projects

Projects recommended for TCIF funding on the multi-modal Altamont Corridor include a mix of highway and rail projects, as well as one dredging project. The multi-modal approach involves shifting truck freight to rail and to water, improving rail service from the Central Valley to the Port of Oakland, improving truck access to critical facilities, and improving goods movement capacity on the rail and water networks.

- SR 4 (Crosstown Freeway) Extension into the Port of Stockton: The project will expedite truck movement to-and-from the Port of Stockton by addressing the inadequate connectivity between the Port and I-5 and SR-4. The project will improve regional east-west circulation in central Stockton and reduce traffic and environmental impacts to the adjacent Boggs Tract neighborhood by providing improved accessibility to the Port to divert truck traffic away from local streets.
- I-580 East Bound Truck Climbing Lane: A new truck climbing lane over the Altamont Pass will provide congestion relief at a major bottleneck for goods traveling between the Bay Area and the Central Valley. The addition of the truck-climbing lane will improve freeway safety and operations and relieve traffic congestion and delay by separating slow-moving traffic from existing mixed-flow lanes and reducing weaving. The project will also reduce vehicular emissions by allowing traffic speeds to increase and remain stable.
- I-880 Improvements at 23<sup>rd</sup> and 29<sup>th</sup> Avenues: I-880 is the major truck route in the Bay Area, serving as the primary truck route to and from the Port of Oakland and providing access to numerous other intermodal facilities including the Oakland International Airport and U.S. Mail and UPS distribution centers. I-880 has the highest volume of trucks in the Bay Area, and also suffers from major congestion and an accident rate five times the

State average. This project proposes to improve a daily recurring congestion point by constructing operational and safety improvements on I-880 at 23<sup>rd</sup> and 29<sup>th</sup> Avenues.

- San Francisco Bay to Port of Stockton Channel Dredging: Dredging the channel to 40 feet will significantly improve the goods movement capacity throughout the channel. The Port of Stockton and Contra Costa County are local sponsors of this federally-authorized deepening project. Sections of the channel from San Francisco Bay to the Port will be deepened, increasing capacity of the channel to accommodate a greater variety of vessel traffic and increased goods movement, benefiting 5 oil refineries and the Ports of Stockton and Sacramento, and providing relief for the congested highways.
- Tehachapi Pass Improvements: The Tehachapi Mountain area is a critical bottleneck on the Altamont's rail corridor. Targeted improvements to the line can provide much-needed capacity, improve corridor efficiency and reliability and reduce idling. The improvements include extended sidings, limited double tracking, and removal of tunnels for a very treacherous mountain area. These improvements will have a significant ripple effect throughout the entire BNSF and UP system, with direct benefits to the greater Bay Area-Central Valley.
- Altamont Pass Short Haul Rail Corridor Development: This project entails the purchase and improved alignment of the UP rail corridor from the City of Stockton in San Joaquin County, over the Altamont Pass, and to Niles Junction in the Bay Area to establish a short haul rail service. Ownership by the San Joaquin Regional Rail Commission (SJRRRC) is pivotal to the start-up and development of short haul rail services in order to provide throughput and reliability to handle increased volumes of trade movement and lessen impacts to an already saturated highway network.
- Short Haul Rail—Crows Landing: This "inland Port" complex will provide logistics, distribution and cargo support services to Central Valley importers and exporters of goods through the Port of Oakland. The project will provide goods movement jobs to the Central Valley and provide inland port access, reducing truck trips over the heavily congested Altamont Pass. It will also improve air quality and reduce greenhouse gas emissions.
- Short Haul Rail—Shafter: This project will establish a dedicated, reliable rail shuttle connecting the Port of Oakland with the City of Shafter at the southern end of the Central Valley. It will improve goods movement access and flow to Southern California and through the Central Valley by better utilizing existing goods movement infrastructure. The new service will reduce the movement of empty containers, remove trucks from congested highways, improve air quality and establish an import/export center that will enhance trade.

When considering the long-term future of the Altamont Corridor, additional improvements to the rail, highway and waterway network will be needed. Additional investments to support the new short haul rail service will be needed, especially if that service is to extend to additional locations in the Central Valley. The ongoing operating structure of that service is something that will evolve as the project moves forward.

There are also a number of highway projects in development along the corridor, including improvements to SR 132 and 152, which are important goods movement corridors within the region. Strategic interchange improvements and access improvements, such as Sperry Road which will provide a new connection between I-5 and SR 99 in San Joaquin County will be pursued in the future.

Barge service is also being contemplated between the Port of Oakland and the Port of Stockton (as well as the Port of Sacramento). However, given the current projected cost structure of the service and the infrastructure investment needed upfront, barge service is considered a long-term strategy for the corridor.

Attachment 1

TCIF January 17th Northern California Trade Projects: Projects and costs were reviewed and approved by regional policy boards. Revenue numbers were updated to reflect preliminary SHOPP assignments based on CTC/Caltrans discussions.

Project #	Sponsor agency	Projects	Project Cost Estimate	Trade (TCIF+SHOPP)	Match	Match secured	Source	GMAP Recommended	SHOPP eligible	Notes
costs in thousands										
TIER 1										
Anchor										
1	Port	7th Street Grade Separation	\$ 427,000	\$ 175,000	\$ 252,000	Y	Port	X		Match to come from the Port. Key grade crossing and overpass work at primary gateway to the Port.
2	Port	Martinez Subdivision Improvements	\$ 215,000	\$ 107,500	\$ 107,500	Y	Private	X		The project will increase capacity along the primary rail line in to the Port, and also the Capitol Corridors route. Grade crossings must be addressed.
3	Port	Construct Outer Harbor Intermodal Terminal	\$ 325,000	\$ 162,500	\$ 162,500	Y	Port	X		Intermodal rail terminals at the Port of Oakland to serve both UP and BNSF. Provides increased intermodal capacity to help divert a higher fraction of container traffic to rail instead of truck. Increases rail capacity.
		Anchor Total	\$ 967,000	\$ 445,000	\$ 522,000					
Central Corridor										
4	State	Donner Summit Improvements	\$ 75,000	\$ 37,500	\$ 37,500	Y	UP	X		UP has committed to provide the match (1:1). Passenger rail concessions from UP for Capitol Corridor service from Sacramento to Roseville and Auburn are necessary for support.
5	SACOG	Sacramento Depot Rail Realignment	\$ 50,000	\$ 20,000	\$ 30,000	Y	Local			Rail realignment; match already secured with local funds, greater than 1:1. Improves service efficiency and reliability for both UP and Capitols. Strong local support.
6	SOL	I-80 Eastbound Cordelia Truck Scales Relocation	\$ 99,600	\$ 49,800	\$ 49,800	Y	Local	X	X	Match from bridge tolls. Project improves truck flows near I-80/680 interchange and reduces unsafe conditions of trucks queuing onto I-80 and difficult weaving patterns.
		Central Corridor Total	\$ 224,600	\$ 107,300	\$ 117,300					
Altamont Corridor										
7	SJ	Hwy 4 Extension to Port of Stockton (Phase 1)	\$ 180,000	\$ 90,000	\$ 90,000	Y	Local	X		Key access for the Port of Stockton; reduces major truck impacts on local community. Phase 1 match from Measure K. Enterprise zone.
8	ALA	I-880 Improvements @ 29th & 23rd Avenues	\$ 95,000	\$ 73,000	\$ 22,000	Y	Local	X	X	Key truck access route to the Port with clearance issues and difficult on and off ramps. Safety and operational improvements.
9	State	Tehachapi Pass Improvements	\$ 82,000	\$ 41,000	\$ 41,000	Y	BNSF	X		Match from BNSF. Increases key capacity for both domestic export from Valley and transcontinental traffic from Port. Would open up rail capacity in the San Joaquin Valley.
10	ALA/CI	I-580 Eastbound Truck Climbing Lane	\$ 64,300	\$ 64,300	\$ -	NA	NA	X	X	Critical truck route connecting Bay Area and Central Valley. Strong support from ag community.
		Short haul rail projects								
11	SJ	San Joaquin Rail Commission ROW purchase for future short haul service - Stockton to Fremont.	\$ 150,000	\$ 75,000	\$ 75,000	Y	ACE/ RMK	X		Purchase of key segments of ROW. This is a critical foundation step to allow for eventual short haul rail service connecting the Central Valley to the Port. ACE match of \$75m from Regional sales tax. UP negotiations ongoing; therefore project cost in flux. ACE currently operates on this ROW; multiple benefits from ownership. GMAP recommended continued investment on the Altamont Rail Corridor; this project provides foundation for rail shuttle.
12	Stan.	Short haul terminus at Crows Landing development	\$ 52,000	\$ 26,000	\$ 26,000	Y	Local/ private			Short haul rail terminus option. Stanislaus County requesting investment on rail corridor serving the proposed facility. Private developer contributing to match; value of county land committed to project proposed as additional match source. Requires either operating rights from UP along the Coast Subdivision or investments along East Bay (#18&19) connecting to the Port of Oakland, as well as access to intermodal facility at Port; timing and feasibility of which are unclear. Requires #11 above for mainline rail connection. Operating subsidy required.
13	Kern	Shafter Intermodal facility	\$ 30,000	\$ 15,000	\$ 15,000	Y	Local			Short haul rail terminus option. New intermodal facility in Shafter to serve future short haul rail operation.
		Altamont Corridor Total	\$ 653,300	\$ 384,300	\$ 269,000					
Dredging projects										
14	Port Sac/ SACOG	Port of Sacramento Dredging	\$ 70,502	\$ 10,000	\$ 60,502	Y	Local			Deepening the channel from 30' to 35'. Match to come from Port of Sacramento operating funds. \$50-60m needs to come from Corps-because multi-year funding in which the Corps does it's budget (annual capability). the funds can be guaranteed only on an annual basis. Currently the Corps' FFY 2008 budget includes \$900,000, and \$600,000 has been proposed for the FFY 2009 budget.
15	Port Stock	Port of Stockton dredging- SF Bay to Port of Stockton	\$ 140,000	\$ 17,500	\$ 122,500	Y	Port			Project request is half the local share (75% federal, 25% local) required for Army Corps dredging projects. The project has been approved by the Corps but the federal portion of the funds can be guaranteed only on annual basis because the Corps does its budget based on annual capacity rather than multi-year commitments.
		Dredging Total	\$ 210,502	\$ 27,500	\$ 183,002					
		TOTAL TIER 1	\$ 2,055,402	\$ 964,100	\$ 1,091,302					

\*Project numbers are NOT an indication of priority ranking. They are for identification purposes only.

TIER 2										
Central Corridor										
16	MTC/ SACOG	Capitol Coridor Operational Improvements	\$ 60,000	\$ 30,000	\$ 30,000	N	UP			Various rail upgrades along the corridor from Oakland to Sacramento. Improves service for both UP and Capitols.
17	SACOG	I-80 widening project	\$ 200,000	\$ 80,000	\$ 120,000	Y	Local			Operational and capacity improvements. Local sales tax secured for match.
		Central Corridor Total	\$ 260,000	\$ 110,000	\$ 150,000					
Altamont Corridor										
Short haul rail: Bay Area - Central Valley										
18	ALA	Oakland Subdivision ROW Purchase	\$ 60,000	\$ 30,000	\$ 30,000	N	None			Short haul rail alignment option- links Niles Junction to Port of Oakland. Match would rely on larger Dumbarton project, which is underfunded and the project status unclear. Final cost is unclear as it will be a negotiation with UP. Not a top priority for the Port of Oakland.
19	ALA/SJ	Alameda Creek Bridge	\$ 32,000	\$ 16,000	\$ 16,000	N	None			Short haul rail alignment option- provides connection at Niles Junction to the Oakland Sub separating passenger and freight service. No match- was originally included as part of the Dumbarton Rail project but there is no funding available.
Altamont highway projects										
20	ALA/ SJ	WB I-580 Truck Climbing Lane Over Altamont	\$ 50,000	\$ 25,000	\$ 25,000	N	Local	X		Match source needed. ITIP funds a possible match source. Strong support from Central Valley ag community. Caltrans staff is working on project development.
21	Stan.	State Route 132 Improvements	\$ 100,000	\$ 50,000	\$ 50,000	N	None			Expand capacity on Rt 132; 15 mile project to connect w/ SR99. Key truck route in the Valley. Have \$14m federal available for easternmost portion, and possible TCRP funds. Phasing and scope being determined.
22	SJ	Hwy 4 Extension to Port of Stockton (Phase 2)	\$ 100,000	\$ 50,000	\$ 50,000	N	TBD	X		Phase 2 of key Port of Stockton connection (#7). Match btd.
23	SJ	Sperry Road	\$ 65,000	\$ 32,500	\$ 32,500	N	Local			Extension of Sperry Road results in a new east/west arterial connection bt I-5 and SR 99. Includes 3 grade separations. EIR is complete. Match possibly available in regional sales tax.
24	SJ	I-5/580 SR 32/Bird Interchange	\$ 41,000	\$ 20,500	\$ 20,500	Y	Local/ private			Construction of new interchange on SR132 and widening of SR132 bt I-5/580. Would help serve aggregate businesses in the area. Match may come from private sector but is not committed.
25	Port	North Airport Air Cargo Road Access Improvements	\$ 10,000	\$ 5,000	\$ 5,000	Y	Port			Project is first phase, another \$8.4M second phase for a later date. Match is Port funds. Improves capacity and access to North Airport air cargo tenants.
26	SJ	I-5 widening project- Stockton	\$280,000	\$130,000	\$130,000	Y	Local			Widens a key segment of Interstate 5 in Central and North Stockton which carries up to 18 % trucks and is a key connector to the Port of Stockton. Matching funds through Measure K and local sources.
		Altamont Corridor Total	\$ 718,000	\$ 359,000	\$ 359,000					
		TIER 2 TOTAL	\$ 978,000	\$ 469,000	\$ 509,000					
		TOTAL TIER 1 AND 2	\$ 3,033,402	\$ 1,433,100	\$ 1,600,302					

# Metropolitan Transportation Commission

## TCIF Program of Projects and Companion Funding Strategy\*

Project #**	Sponsor agency	Projects	Project Cost Estimate	Trade (TCIF+SHOPP)	Match	Match secured	Source	GMAP Recommended	SHOPP eligible
<b>TIER 1</b>									
<i>costs in thousands</i>									
<b>Anchor</b>									
1	Port	7th Street Grade Separation	\$ 427,000	\$ 175,000	\$ 252,000	Y	Port	X	
2	Port	Martinez Subdivision Improvements	\$ 215,000	\$ 107,500	\$ 107,500	Y	Private	X	
3	Port	Construct Outer Harbor Intermodal Terminal	\$ 325,000	\$ 162,500	\$ 162,500	Y	Port	X	
<b>Anchor Total</b>			<b>\$ 967,000</b>	<b>\$ 445,000</b>	<b>\$ 522,000</b>				
<b>Central Corridor</b>									
6	SOL	I-80 Eastbound Cordelia Truck Scales Relocation	\$ 99,600	\$ 49,800	\$ 49,800	Y	Local	X	X
<b>Central Corridor Total</b>			<b>\$ 99,600</b>	<b>\$ 49,800</b>	<b>\$ 49,800</b>				
<b>Altamont Corridor</b>									
8	ALA	I-880 Improvements @ 29th & 23rd Avenues	\$ 95,000	\$ 73,000	\$ 22,000	Y	Local	X	X
10	ALA/Ct	I-580 Eastbound Truck Climbing Lane	\$ 64,300	\$ 64,300	\$ -	NA	NA	X	X
<b>Altamont Corridor Total</b>			<b>\$ 159,300</b>	<b>\$ 137,300</b>	<b>\$ 22,000</b>				
<b>TOTAL</b>			<b>\$ 1,225,900</b>	<b>\$ 632,100</b>	<b>\$ 593,800</b>				

\*Projects and costs were reviewed and approved by regional policy boards. Revenue numbers were updated to reflect preliminary SHOPP assignments based on CTC/Caltrans discussions.

\*\*Project numbers are NOT an indication of priority ranking. They are for identification purposes only and mirror the project numbers from the Northern CA Trade Strategy project list.

**2007 TCIF Funding Nomination for**  
**the 7<sup>th</sup> Street Grade Separation and Roadway Improvements**  
**submitted by Port of Oakland**

A. Project description and background (including purpose and need).

7th Street is the key road accessing the Port of Oakland from the east. It parallels the Bay Area Rapid Transit (BART) aerial structure and crosses above the BART line where it dives below ground into the transbay tube. As it runs through the Port complex, 7th Street includes a Class I bicycle path out to the Middle Harbor Shoreline Park and Port View Park.

The Outer Harbor Intermodal Terminals (OHIT), a proposed extension of Port of Oakland intermodal rail terminals, is planned to be located on 160 acres of the former Oakland Army Base, which has become part of the Port of Oakland (the "Port") through the Base Realignment and Closure process. The 7<sup>th</sup> Street Grade Separation will separate truck traffic on 7<sup>th</sup> St., one of three freeway gateways into the Port, from increased rail movements between OHIT and the rail mainline to the north of 7<sup>th</sup> St. and the existing rail facilities to the south, thereby eliminating conflicts between trucks and trains at a major intersection adjacent to OHIT. This project will also improve safety for pedestrian, bicycle and automobile movements to and from Middle Harbor Shoreline Park, a major public access point along the shore of San Francisco Bay.

In anticipation of the acquisition of portions of the former Oakland Army Base and of other development opportunities, the Port completed a Maritime Development Alternative Study (MDAS) in 2004 to help guide it through infrastructure decisions. The MDAS reviewed the marine terminals, intermodal yards and roadway network in the Port complex, and made recommendations on improvement projects and the sequencing of each such project. The MDAS estimates that "the existing rail system will constrain Port capacity at between 2.5 and 3.5 million TEU per year." (MDAS, p. 2). The MDAS recommended improving the 7<sup>th</sup> Street and Maritime Street intersection (among others) to dramatically increase the Port roadway network capacity.

The Port of Oakland's cargo volume makes it the fourth busiest container port in the United States, handling 99% of the waterborne goods moving through Northern California, the nation's sixth largest metropolitan market. The Port has been, and continues to be, the premier export seaport for California's agricultural goods from the Central Valley and the wine country. However, imports have grown by over 80% between 2001 and 2006, nearly 8 times faster than the growth in exports. The outsourcing of manufacturing to foreign countries with low labor costs, primarily in Asia, has increased trans-Pacific imports at the Port of Oakland and other ports of entry. The recent weakness in the dollar has led to faster growth in exports than imports in 2007, but the Port's continued strength in exports leaves it well positioned for the future with a healthy balance between exports and imports. Based on the Port's historical growth pattern of four to five percent annually, the Port anticipates handling more than five million TEUs by 2025. See Exhibit A.

Eight container terminals and two intermodal rail facilities currently serve the Port. The Union Pacific (UP) and BNSF railroad facilities are located adjacent to the heart of the marine terminal areas to provide a reliable and efficient movement of cargo between the marine terminals and the intermodal rail facilities. UP's existing intermodal rail facility at the Port is the "Railport Oakland" and BNSF's intermodal rail facility at the Port is the "Oakland International Gateway" (OIG). The rail facilities also serve regional or "transload" warehouse facilities. (Container goods are unloaded, sorted, consolidated and transferred to railcars or domestic 53' truck trailers).

The Port has three key motor vehicle access points in the south, east and north, at Adeline Street, 7<sup>th</sup> Street and West Grand Avenue, respectively. All three access points connect to highways, including Interstates 80, 880, 580 and State Route 24. The internal Port roadway network has sufficient redundancy to allow vehicles to use any of the three access points, regardless of which Port terminal they are working at. 7<sup>th</sup> Street parallels the Bay Area Rapid Transit (BART) aerial structure and crosses above the BART line where it dives below ground into the transbay tube. As it runs through the Port complex, 7<sup>th</sup> Street includes a Class I bicycle path out to the Middle Harbor Shoreline Park and Port View Park.

Current rail TEU capacity at the Port is for 700,000 lifts (1 million TEUs) per year. The Port will need capacity to accommodate an additional 2 million TEUs per year to meet the projected rail need of 3 million TEUs per year around 2020-2025. The Port seeks to respond with high priority rail development projects, coordinated with railroads and shipping lines. While OHIT will provide expanded capacity for the transfer of containers to and from trains, the functionality of the facility will be severely limited without a safe, grade separated crossing of 7<sup>th</sup> Street. Without the 7<sup>th</sup> Street Grade Separation, the benefits of OHIT would be off-set by a new bottleneck in the form of long, slow train movements conflicting with at-grade truck traffic running through and bifurcating the Port complex.

B. Project scope, function and anticipated benefits.

The proposed 7<sup>th</sup> Street Grade Separation will provide new grade separated rail crossings of 7<sup>th</sup> Street for BNSF and UP terminals, including replacement of the damaged former Southern Pacific overhead and the addition of rail expansion capacity. The Project will also improve traffic operations and expand roadway capacity through the reconstruction of 7<sup>th</sup> Street along a new alignment, in a deeper trench section, between Cedar Street and Maritime Street, reconfiguration of 7<sup>th</sup> /Maritime Street intersection into 2 3-way intersections, realignment of Maritime Street, and bicycle and pedestrian access improvements. See a map of the 7<sup>th</sup> Street Grade Separation and Roadway Improvements in Exhibit B.

Currently, the Union Pacific and the BNSF intermodal rail facilities at the Port are accessed from the north across a single railroad bridge over 7<sup>th</sup> Street, the former Southern Pacific overhead. To reach the BNSF intermodal terminal, trains must negotiate an extremely sharp curve from the Southern Pacific overhead, threading through BART columns then west, parallel to BART, and into the BNSF terminal. There is only a single lead track into the BNSF terminal, restricting BNSF's facility capacity to no more than one train at a time entering or leaving the terminal. UP's Oakland terminal is bifurcated by 7<sup>th</sup> Street, with all yard activity forced through the former Southern Pacific overhead, including not only UP's intermodal cargo, but other regional cargo that is sorted and managed at UP's Oakland hub.

The Port's ability to enhance access to either the BNSF or UP terminals across 7<sup>th</sup> Street is physically restricted. Any new connection across 7<sup>th</sup> Street is limited by 7<sup>th</sup> Street's physical profile which quickly rises from its nadir below the overhead, limiting the railroad's ability to stay clear of the roadway traffic, and remain under the BART aerial structure. The Port cannot easily improve access and terminal capacities without significantly modifying 7<sup>th</sup> Street.

Regardless of the Port's rail plans, there are multiple safety concerns in the 7<sup>th</sup> Street corridor that require improvement. The former Southern Pacific overhead on 7<sup>th</sup> Street between Maritime Street and Bay Street, a critical element to the Port's transportation network, has been physically damaged by excessively tall trucks and other vehicles. The flow of goods to and from the Port complex would be severely hindered if this structure were damaged to the point of failure. In addition, the structure's narrow underpass increases the risk of collisions between two vehicles, collisions with the structure itself, and traffic delays associated with disabled vehicles.



Pedestrian and bicycle access is also limited by the narrow sidewalk on the westbound 7<sup>th</sup> Street subway beneath the former Southern Pacific overhead, on the main route for pedestrians and bicyclists to Middle Harbor Shoreline Park. Bicyclists are required to dismount and walk through the subway sidewalk or ride through the subway in the street.

Construction of the proposed 7<sup>th</sup> Street Grade Separation will be the most cost-effective solution to the issues it addresses because:

1. Of all the portals into the Port, 7<sup>th</sup> Street is currently most constrained due to the old railroad bridge. The width and number of lanes is completely inadequate for the projected capacity need.
2. The other two portals (Adeline to the East and West Grand to the North) are at the extreme ends of the Maritime Area. Traffic through those portals only serve a limited area (Outer Harbor for West Grand and Inner Harbor for Adeline). 7<sup>th</sup> Street is centrally located and serves both Inner and Outer Harbors.
3. The improvements to 7<sup>th</sup> Street are necessary for the expansion of the Rail Yards (both for the UP and the BNSF). The connections between the new and existing yards cannot be made without the 7<sup>th</sup> Street project.
4. The cost for the upgrade of the other portals would be large, but would not provide the same benefits there for the return on investment would be less.

C. Project satisfies TCIF screening criteria

Eligibility: Included in appropriate adopted regional goods movement or transportation plan and has commitment of 1:1 funding match.

- Project is included in GMAP, Cal-MITSAC, trade infrastructure and goods movement plans adopted by regional transportation planning agencies, or an adopted regional transportation plan.

Project	GMAP	Cal-MITSAC	Adopted Regional Goods Movement Plan	RTP
7 <sup>th</sup> Street Grade Separation	X	X	X	X  Proj # 22082

\*\*\*\*\*Check the box if Project is identified in the above plan.\*\*\*\*\*

This project is part of the State Goods Movement Action Plan.

Many of the regional transportation planning agencies in Northern California, led by the Metropolitan Transportation Commission, Sacramento Area Council of Governments (COG), San Joaquin COG, and Stanislaus COG have worked together to develop a Northern California Trade Corridors Strategy. This strategic vision, coupled with a specific program of projects, aims to address the growing needs of goods movement along the primary trade corridors in Northern California. The coalition is also supported by the six remaining Councils of Government in the Central Valley, including Kern County, the Ports of Oakland, Stockton and Sacramento, and business leaders from throughout Northern California. This coalition identified the 7<sup>th</sup> Street Grade Separation as a top tier priority for Northern California for the TCIF program.

- Specific description of entire cost

<b>Project</b>	<b>Total project cost</b>	<b>TCIF request</b>	<b>Identified matching funds</b>	<b>State of matching funds*</b>	<b>Match source</b>	<b>Other funding</b>	<b>Source</b>
7 <sup>th</sup> Street Grade Separation	\$427 million	\$175 million	\$252 million	Approved by Port	User fees		

\*If match is in any way questionable, identify issues here.

On December 17, 2007, the Executive Committee of the Board of Port Commissioners approved a plan to develop a Port-based user fee program that would use fees levied on containers moving through the Port as a source of match funding on this project. The Executive Committee specifically resolved, in part:

[T]he Executive Director or his designee is hereby authorized to represent that the Port plans to adopt a container fee (subject to all requirements under the law) in an amount not to exceed the either (i) the amount recommended in the Martin Study as described in the Agenda Report dated December 17, 2007, or (ii) the average container fee charged by the ports at San Pedro Bay in Southern California, all for the purpose of financing the Port's share of the Projects that will not be funded by TCIF Funds. Such container fee may include a charge to the beneficial users of the rail systems at the Port[.]

- Description of public benefit.

The Port has been deepening its harbor to accommodate the newer, larger vessels. Along with the terminal enhancements the Port has made, the harbor deepening has positioned the Port to be able to bring in first port-of-call vessels which enable more cargo to flow through the Port's facilities. However, to allow these improvements to deliver jobs, tax revenue and other benefits to the region and the state, the Port and the Railroads must also implement landside access improvements, such as the 7<sup>th</sup> Street Grade Separation.

The 7<sup>th</sup> Street Grade Separation project relieves the rail bottleneck at the 7<sup>th</sup> Street / former Southern Pacific overhead (which is currently shared by both UP and BNSF) and mitigates the anticipated decrease in level of service at the 7<sup>th</sup> / Maritime St. intersection. The rail bottleneck will be alleviated by removing BNSF traffic from the crossing and providing BNSF with a new grade separated structure at a new intersection. The rail bottleneck will be further alleviated by improving the roadway profile so that additional bridges can be installed above the trench, without conflicting with excess height vehicles. The new roadway will allow UP to more efficiently manage its Oakland hub, allowing for expanded intermodal capacity that is unimpeded by the regional carload business. As roadway traffic volumes continue to grow throughout the Port complex, this project will upgrade the traffic signals and roadway geometrics to increase roadway capacity to meet the projected demand and mitigate congestion. The new grade separated rail-road crossings prevent conflicts between trucks and trains at a major intersection adjacent to OHIT.

The 7<sup>th</sup> Street project, when combined with OHIT will potentially increase the rail fraction of containers handled in Oakland, further reducing the impact of trucks on the public highways and thereby mitigating traffic congestion and air quality impacts. In addition to the traffic impacts, trucking uses over 5 times more fuel, emits twice as much PM-10 and 4 times more CO<sub>2</sub> per ton-mile than a train.

Construction of the project is anticipated to involve hundreds of construction workers for a period of nearly three years. Once built, the grade separation project will not require any employed staff. Though

the completed grade separation will not provide any direct employment, it's indirect benefits to the Port will allow continued growth and increased economic impact. Continued growth in trade at the Port of Oakland will proportionally increase the number of jobs in the region, and local and state tax revenues.

Deliverability: See also Gant Chart in Exhibit C

As has been described above, the 7<sup>th</sup> Street project is directly related to the OHIT project. The project schedule and project delivery methods are closely related for these two projects. The success of each project will greatly compliment the success of the other. Risks to the project include the health of the global economy and the continued demand for goods movement through the Port of Oakland. This risk is thought to be relatively minor, as the long term trend in goods movement has been steady, stable annual growth.

The 7<sup>th</sup> Street Grade Separation is currently in the design phase, with further design, environmental analysis and property negotiations scheduled to commence in early 2008. In 2009, the first phase of construction is planned, with the relocation and protection of major utilities. Since the existing street is a major utility corridor, these utilities must be relocated and protected prior to construction of the roadway. Such utility work is anticipated to be completed in 2010, though the Port anticipates that the roadway contractor can start on portions of the grade separation project as early as the midpoint of the utility work. Completion of the roadway relocation and grade separation structures are anticipated to take approximately 2 years, with completion scheduled by the end of 2012.

The 7th Street Grade Separation project was described within the Oakland Army Base Redevelopment Area Environmental Impact Report (EIR) approved in 2002. However, the Port plans to prepare a supplemental EIR to discuss specific impacts that were not directly addressed in that document. Certification of a supplemental EIR is expected in early 2009.

The project includes property currently outside of the existing 7<sup>th</sup> Street public right of way. A portion of this property is owned by the Port, and a portion is owned by the Union Pacific. The Port will be required to modify multiple leases with US Customs & Border Protection, the Berths 25-26 terminal, and the Berth 24 terminal. The Port will also negotiate with Union Pacific on the new street location, and with the City of Oakland on the vacation and rededication of the public right of way. Lastly, the Port will have to negotiate an access agreement with BART, which currently has access to the transbay tube off of 7<sup>th</sup> Street. All these property issues are anticipated to take 1.5 years and will be commenced in 2008. Construction risks include the extent of potential remediation and removal of contaminated soils required within the project area and the potential escalation of material prices for steel, concrete and fuel. These risks have been anticipated by the Port, with escalation factors assumed for materials and labor on an annual basis. Since the funding for this project is dependent on TCIF monies, delay in the appropriation of money may lead to project delays and additional material cost escalations accordingly.

D. Project addresses the TCIF evaluation criteria.

1. Freight System (Goods Movement)

- Throughput: Project provides for increased volume of freight traffic through capacity expansion or operational efficiency.

Based on the Port's planning estimates, "the existing rail system will constrain Port capacity at between 2.5 and 3.5 million TEU per year." (MDAS, p. 2). The 7<sup>th</sup> Street and Maritime Street intersection is one of 5 key intersections that the MDAS recommended for improvement to dramatically increase the Port

roadway network capacity. Without construction of the 7<sup>th</sup> Street project, the OHIT facility cannot be adequately constructed to provide additional rail capacity.

The western portion of the project will allow the BNSF lead tracks to be extended, creating full length arrival and departure tracks. The expanded arrival and departure tracks will allow for multiple trains to assembled, disassembled, and inspected prior to departure or immediately following arrival at the terminal.

According to the OAB EIR, level of service at the 7<sup>th</sup> / Maritime St intersection will reach LOS F in the year 2025 based on redevelopment plans at the former Oakland Army Base. Reconstruction of 7<sup>th</sup> Street and the associated intersection improvements will improve conditions to LOS D or better during the peak hour.

- Velocity: Project increases the speed of freight traffic moving through the distribution system.

The elevated portion of the 7<sup>th</sup> Street Grade Separation project will allow the BNSF leads to be reconfigured for improved access to the main line. Currently, trains must negotiate a tight curve under BART and across the existing 7th Street underpass. Construction of the elevated western portion of the project will allow BNSF trains to take a more direct route, around the BART West Oakland portal, and directly into the main line, along a higher speed route with less risk of derailment.

- Reliability: Project reduces the variability and unpredictability of travel time.

According to the OAB EIR, level of service at the 7<sup>th</sup> / Maritime St intersection will reach LOS F in the year 2025 based on redevelopment plans at the former Oakland Army Base. Reconstruction of 7<sup>th</sup> Street and the associated intersection improvements will improve conditions to LOS D or better during the peak hour. This will improve the reliability of truck travel time through the intersection.

The western portion of the project will allow the BNSF lead tracks to be extended, creating full length arrival and departure tracks. The expanded arrival and departure tracks will allow for multiple trains to assembled, disassembled, and inspected prior to departure or immediately following arrival at the terminal. This will decrease the likelihood of rail cargo delay, increasing reliability.

## 2. Transportation System (Priorities)

- Safety: Project increases the safety of the public, industry workers, and traffic.

There are multiple safety concerns in the 7<sup>th</sup> Street corridor that requiring improvement which the 7<sup>th</sup> Street Grade Separation will address. The former Southern Pacific overhead on 7<sup>th</sup> Street between Maritime Street and Bay Street has been physically damaged by excessively tall trucks and other vehicles. The structural integrity of the overhead has not been analyzed; however, further damage by excessive height vehicles will increase the risk of its failure.

In addition to the low vertical clearance, the horizontal clearance through the structure is severely limited by traffic lanes that are less than 11' wide and minimal shoulders. The narrow underpass increases the risk of collisions between two vehicles and collisions with the structure itself.

Relocation of BNSF leads will reduce the number of trains at the Maritime Street at-grade crossing. All the BNSF OIG traffic currently travels through an at-grade crossing with Maritime Street. Creation of the 7<sup>th</sup> Street grade separation project will dramatically reduce the number of trains entering this crossing, and

the associated conflicts they may have with the heavy truck traffic along Maritime Street, and the significant queuing at 7th Street that can back vehicles up into the at-grade crossing.

The 7<sup>th</sup> Street Grade Separation will improve safety for pedestrian, bicycle and automobile movements to and from Middle Harbor Shoreline Park, a major public access point along the shore of San Francisco Bay. Pedestrian and bicycle access is also limited by the narrow sidewalk on the westbound 7<sup>th</sup> Street subway beneath the former Southern Pacific overhead, on the main route for pedestrians and bicyclists to Middle Harbor Shoreline Park. Bicyclists are required to dismount and walk through the subway sidewalk or ride through the subway in the street.

- Congestion Reduction/Mitigation: Project reduces daily hours of delay on the system and improves access to freight facilities.

In 2006, approximately 31 percent of the Port's total container traffic was transported by rail through its intermodal rail yards. As the Port grows, it anticipates that the percentage of intermodal cargo could increase to approximately 50 percent. However, this critical bottleneck for both rail and truck traffic must be addressed for rail service to be effective. Increasing intermodal transport will reduce the relative volume of Port containers transported by truck on regional roadways, which are already constrained and expected to be come even further constrained from future local and regional growth. Any cargo that is moved by train from the Port benefits the overall transportation system by reducing truck trips to or from the Port of Oakland.

The proposed project will reduce the potential delay and improve level of service at the crossing. Anticipated growth in shipping will result in additional congestion at the 7th St / Maritime Street intersection. By reconfiguring this intersection, the Port anticipates reducing total vehicular delay by 62,000 hours annually when compared to the no-build scenario. See Exhibit D for more information about this delay reduction.

In sum, the proposed project would facilitate the movement of cargo to rail facilities, notably the proposed OHIT, and is therefore key to leveraging the benefits of rail transport for additional future throughput. Additionally, the project will reduce existing congestion and delays on local roadways, which currently results in undesirable environmental effects such as truck and other vehicle idling.

- Key Transportation Bottleneck Relief: Project relieves key freight system bottlenecks where forecasts of freight traffic growth rates indicate infrastructure or system needs are inadequate to meet demand.

The 7<sup>th</sup> Street Grade separation will eliminate the delays in traffic movements due to the current and future volume of rail movements. The rail growth forecast in the MDAS indicates that the LOS will degrade to level F when Port of Oakland TEU volume is between 2.6 and 3.5 million. The Port is currently moving 2.4 million TEUS. During peak traffic periods there are delays to traffic along 7th Street when rail movements occur at the current TEU volume. It is projected that the Port will grow to 2.8 million TEUs within the next five years.

Currently all Port intermodal traffic is forced to thread below the BART columns a 7<sup>th</sup> Street grade separation structure that has only a limited width and has the risk of being further damaged by excess height vehicles because of its low vertical clearance. Construction of the 7<sup>th</sup> Street grade separation project will allow the undercrossing to be expanded for new tracks, and so accommodate the projected increase in vehicle traffic.

- Multi-modal Strategy: Project employs or supports multi-modal strategies to increase port and transportation system throughput while reducing truck vehicle miles/hour traveled (VMT/VHT).

Every train that is loaded at the Port can eliminate 750 truck trips, encompassing westbound and eastbound cargo movements, bob-tail moves associated with one-way truck trips, and chassis repositioning required with off-dock transfers. This calculation makes the following assumptions, which are conservative to avoid overestimating truck reduction benefits: eastbound train carries 280 containers, westbound carries 240 containers, bob tail moves add 35% and chassis repositioning adds 10% to the total truck trips. The Port intermodal yards could eliminate over 10,000 truck trips for every 3,500 intermodal containers unloaded and 3,000 intermodal containers loaded at the wharf.

- Interregional Benefits: Project links regions/corridors to serve statewide or national trade corridor needs.

OHIT will improve the efficiency of Northern California's freight rail service, which is part of the transcontinental freight rail system. This will decrease the burden borne for such service by Southern California ports and communities, while increasing the West Coast's ability to accommodate increased transcontinental freight rail traffic. The 7<sup>th</sup> Street Grade Separation is necessary minimize the impacts of OHIT on the local freight delivery system.

### 3. Community Impacts

- Air Quality Impact

With development of the 7<sup>th</sup> Street Grade Separation, the Port of Oakland will be prepared to efficiently handle intermodal cargo growth through the foreseeable planning horizon while minimizing environmental impacts.

The Port of Oakland has estimated the air quality benefits of the proposed project by evaluating the impacts of traffic congestion and delay. Based on previous traffic analyses, the Port projected the no build scenario to be LOS D by 2015 rising quickly to LOS F in 2020. In performing its analysis, the Port assumed full implementation of the ARB Port Truck Rule, which was adopted by ARB on 12/6/07. Emissions from trucks in 2020 are not expected to differ significantly from those in 2030 because the ARB rule making will be fully implemented by 2020.

The Port's preferred design alternative (i.e. proposed project) is a combination of two development scenarios previously studied by the Port and identified in Table 1 as "Alt. 1-2" and "Alt. 6-0." Because traffic analyses had been previously conducted for these two alternatives separately, the Port evaluated emission benefits for the same two alternatives, recognizing that emission benefits of the proposed project are likely to be bounded by the benefits of the two scenarios as evaluated independently. The emissions benefits of the proposed project are presented in Exhibit E.

- Community Impact Mitigation

The 7th Street grade separation should be largely constructed prior to starting construction on the southern portion of the OHIT and tail tracks. Once the roadway is separated from the rail grade, rail construction can proceed with minimal impact to roadway operations.

The 7<sup>th</sup> Street Grade Separation will also improve safety for pedestrian, bicycle and automobile movements to and from Middle Harbor Shoreline Park, a major public access point along the shore of San Francisco Bay.

Prior to construction of the OHIT, the Port will establish a 15 acre parcel within the development for local truck parking and trucking related services. The 15 acre parcel will be provided in combination with a similar sized parcel adjacent to the Port of Oakland within the City of Oakland's East Gateway portion of the former Oakland Army Base. The combined 30 acres of truck parking will help to minimize the number of truck related businesses in surrounding residential communities.

The Port's Truck Management Plan includes grants to truckers for the purchase of cleaner burning diesel engines that meet today's emissions standards. This program helps to reduce smog from older, higher pollution truck engines with more efficient, less polluting new vehicles. This program reduces the pollutants produced at the Port from older trucks.

- Economic/Job Growth

The Port has been deepening its harbor to accommodate the latest generation of larger container shipping vessels. Along with recent Port-funded terminal enhancements, including redevelopment of former military facilities, the harbor deepening has positioned the Port to be able to bring in first port-of-call vessels that enable more cargo to flow through the Port's facilities. However, to allow these improvements to deliver jobs, tax revenue and other benefits to the region and the state, the Port and the railroads must also implement landside access improvements, such as the 7<sup>th</sup> Street Grade Separation.

Construction of the 7<sup>th</sup> Street project is anticipated to involve hundreds of construction workers for a period of approximately three years. The Port's local hiring goals for public works projects, such as 7th Street, are targeted at ensuring that local residents in the communities surrounding the Port benefit the most from construction jobs. The adopted goal is for:

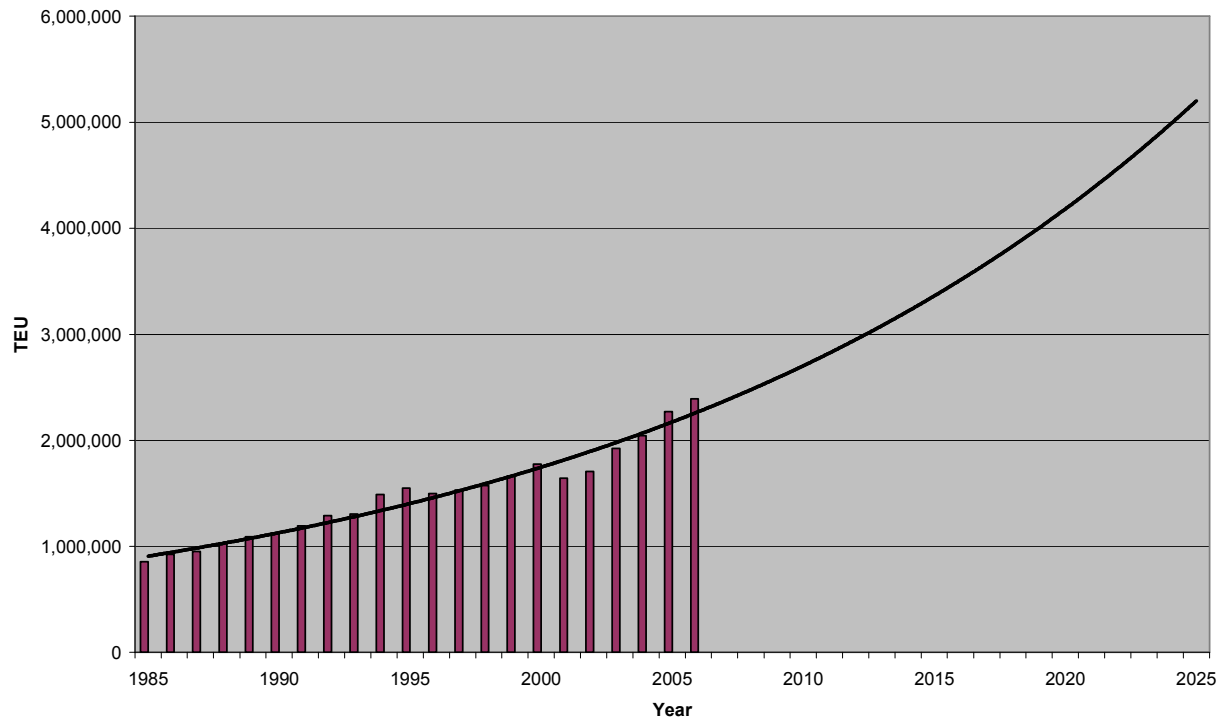
- 50% of the total hours worked by residents of the Port's Local Impact Area (LIA) (Oakland, Alameda, San Leandro and Emeryville).
- 20% of apprentice hours worked by LIA residents.
- Local Business Area residents (Alameda and Contra Costa Counties) to work when LIA residents are not available.

Although the completed grade separation will not provide any direct employment, it's indirect benefits to the Port and community will allow continued trade growth and increased economic impact. Continued growth in trade at the Port of Oakland will proportionally increase the number of jobs in the region, and local and state tax revenues.

To ensure that local residents benefit from growth in international trade, the Port's Employment Resources Development Program (ERDP) conducts extensive outreach to match Oakland residents with jobs provided by Port tenants. ERDP staff work closely with local job seekers to improve their skills and provide training opportunities. In addition to providing employment services, ERDP also helps to educate and train local youth on Port development and career opportunities by coordinating with various schools and training programs for internships within the Port. For the purpose of developing career opportunities in logistics and transportation, SRD and ERDP are involved in community collaborations that address specific issues related to workforce and economic development; such as working with the Chambers, local government, education and community agencies. See Exhibit F for more information regarding economic impacts of the project.

## EXHIBIT A

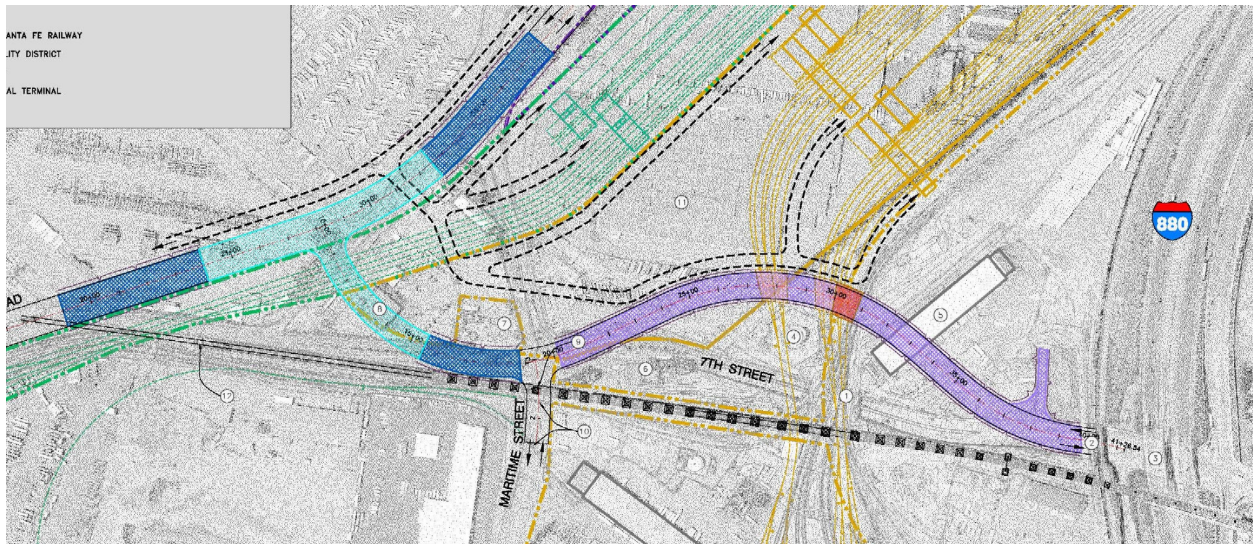
Port of Oakland Container Thruput History (1985-2006)  
and 2025 Forecast





**EXHIBIT B**

**PROJECT MAP & DESCRIPTION**

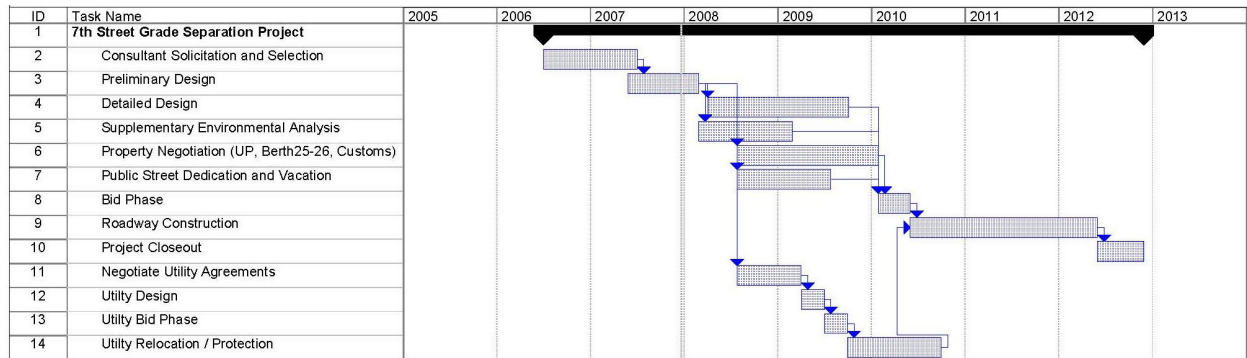


As shown in the figure above, the purple area indicates the new trench location, which will swing to the north of the existing alignment in order to reduce complications keeping traffic moving on 7<sup>th</sup> Street during construction. The red space in the middle of the purple area indicates the new and future bridge locations for the proposed OHIT. Additional bridge structures can be constructed east of these locations at such a time as further north-south connections are deemed necessary. The trench rises back up to the surface at the existing 7<sup>th</sup> / Maritime St intersection. The north leg of the existing 7<sup>th</sup> / Maritime St intersection will be eliminated.

The light and dark blue areas indicate the location of a new roadway overpass. From the existing 7<sup>th</sup> / Maritime St intersection, 7<sup>th</sup> Street will rise into an overpass, bridging over the new OHIT-BNSF terminal rail connection and rising to a new 3-way intersection with the northern portion of Maritime Street. From this new intersection, traffic will descend back to existing grade and continue along either 7<sup>th</sup> Street or Maritime Street.

## EXHIBIT C

### PROJECT SCHEDULE



## **EXHIBIT D**

### **DELAY REDUCTION DUE TO PROJECT**

Intersection		Unmitigated 2025 Peak Hour Average Vehicle Delay (sec)		Mitigated 2025 Peak Hour Average Vehicle Delay (sec)	
		AM	PM	AM	PM
7th Street	I-880 / Frontage Road	43.1	33	43.1	33
7th Street	Maritime Street	126.8	78.5	53.1	31.9

Intersection		Estimated Future Peak Hour Volume (veh/hr)	
		AM	PM
7th Street	I-880 / Frontage Road	1,729	1,636
7th Street	Maritime Street	1,149	1,226

Intersection		Estimated Future Unmitigated Annual Vehicle Delay (hrs)	Estimated Future Mitigated Annual Vehicle Delay (hrs)
7th Street	I-880 / Frontage Road	56,000	56,000
7th Street	Maritime Street	105,000	43,000

## **EXHIBIT E**

### **AIR POLLUTION MITIGATION DUE TO PROJECT**

Average emissions and emissions benefit.

Scenario	Emissions (tons/year)				
	ROG	CO	NO <sub>x</sub>	PM <sub>10</sub>	CO <sub>2</sub>
No build	1.0	8.8	5.5	0.20	4,718
Alt. 1-2	0.8	8.0	4.9	0.18	4,176
Alt. 6-0	0.8	7.9	4.8	0.17	4,076
2015 – 2030 Cumulative Emission Reductions (tons)					
Alt. 1-2	3.3	13.3	10.0	0.4	8,677
Alt. 6-0	3.8	15.7	11.8	0.5	10,267

Note: ARB Port Truck Rule built into the analysis. That is, we have calculated benefits above and beyond those expected to come from implementation of the Port Truck Rule

**EXHIBIT F**

**ECONOMIC BENEFITS OF 7<sup>TH</sup> STREET**  
**(AS AN ENHANCEMENT TO OHIT)**

Job Category	Number Generated
Direct jobs	3,773
Induced jobs	5,152
Indirect jobs	3,437
Total jobs	12,362

Income Category	Dollars (millions)
Direct personal earnings	\$169.1
Responding and consumption	\$456.9
Indirect income	\$141.8
Total income	\$767.8

Direct Local Economic Impact	Dollars (millions)
Business revenue	\$1,582.2
Local purchases	\$375.8
State & local taxes	\$79.1



# 2008 Project Programming Request

## (Project Information)

General Instructions

<input checked="" type="checkbox"/> New Project		<input type="checkbox"/> Amendment (Existing Project)		Date:	
<b>Caltrans District</b>		<b>EA</b>		<b>PPNO</b>	
04					
<b>County</b>	<b>Route/Corridor</b>	<b>Project Sponsor/Lead Agency</b>		<b>MPO</b>	<b>Element</b>
ALA		Port of Oakland			
<b>Project Title</b>					
7th Street Grade Separation and Roadway Improvements					
<b>PM Bk</b>	<b>PM Ahd</b>	<b>Project Mgr/Contact</b>	<b>Phone</b>	<b>E-mail Address</b>	
<b>Location, Project Limits, Description, Scope of Work, Legislative Description</b>					
The 7th Street Grade Separation will separate truck traffic on 7th St. from rail movements between expanded rail facilities and the rail mainline to the north of 7th St. and the existing rail facilities to the south. 7th Street, which accesses the Port of Oakland from the east, parallels the Bay Area Rapid Transit (BART) aerial structure and crosses above the underground portion of the BART line.					
<b>Component</b>	<b>Implementing Agency</b>		<b>AB 3090</b>	<b>Letter of No Prejudice</b>	
PA&ED	Port of Oakland		<input type="checkbox"/>	<input type="checkbox"/>	
PS&E	Port of Oakland		<input type="checkbox"/>	<input type="checkbox"/>	
Right of Way	Port of Oakland		<input type="checkbox"/>	<input type="checkbox"/>	
Construction	Port of Oakland		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Legislative Districts</b>					
<b>Assembly:</b> 16		<b>Senate:</b> 9			
<b>Congressional:</b> CA 9th					
<b>Purpose and Need</b>					
The proposed 7th Street Grade Separation will provide new grade separated rail crossings of 7th Street for BNSF and UP terminals, including replacement of the damaged former Southern Pacific overhead and the addition of rail expansion capacity. The Project will also improve traffic operations and expand roadway capacity through the reconstruction of 7th Street along a new alignment, in a deeper trench section, between Cedar Street and Maritime Street, reconfiguration of 7th /Maritime Street intersection into 2 3-way intersections, realignment of Maritime Street, and bicycle and pedestrian access improvements.					
<b>Project Benefits</b>					
The 7th Street Grade Separation will separate truck traffic on 7th St., one of three freeway gateways into the Port, from increased rail movements between OHIT and the rail mainline to the north of 7th St. and the existing rail facilities to the south, thereby eliminating conflicts between trucks and trains at a major intersection adjacent to OHIT. This project will also improve safety for pedestrian, bicycle and automobile movements to and from Middle Harbor Shoreline Park, a major public access point along the shore of San Francisco Bay.					
<b>Project Milestone</b>					<b>Date</b>
Project Study Report Approved					07/31/02
Begin Environmental (PA&ED) Phase					01/01/02
Circulate Draft Environmental Document			<b>Document Type</b> EIR	04/29/02	
Draft Project Report					02/29/08
End Environmental Phase (PA&ED Milestone)					01/30/09
Begin Design (PS&E) Phase					04/01/08
End Design Phase (Ready to List for Advertisement Milestone)					10/01/09
Begin Right of Way Phase					07/31/08
End Right of Way Phase (Right of Way Certification Milestone)					01/31/10
Begin Construction Phase (Contract Award Milestone)					09/30/09
End Construction Phase (Construction Contract Acceptance Milestone)					06/01/12
Begin Closeout Phase					06/01/12
End Closeout Phase (Closeout Report)					12/01/12

**2008 TCIF Funding Nomination for**  
**the Outer Harbor Intermodal Terminals (OHIT)**  
**submitted by Port of Oakland**

A. Project description and background (including purpose and need).

The Outer Harbor Intermodal Terminals (OHIT), a proposed intermodal rail facility, is planned to be located on 160 acres of the former Oakland Army Base, which has become part of the Port of Oakland (the "Port") through the Base Realignment and Closure process. OHIT will allow the railroads to load and unload containers more efficiently, and will help address the portwide intermodal throughput goal. OHIT also will relieve congestion on rail main lines adjacent to the Port. In addition, OHIT will generate environmental benefits for our region and the state by providing the capability of moving more goods by rail rather than by trucks.

The Port of Oakland's cargo volume makes it the fourth busiest container port in the United States, handling 99% of the waterborne goods moving through Northern California, the nation's sixth largest metropolitan market. The Port has been, and continues to be, the premier export seaport for California's agricultural goods from the Central Valley and the wine country. However, imports have grown by over 80% between 2001 and 2006, nearly 8 times faster than the growth in exports. The outsourcing of manufacturing to foreign countries with low labor costs, primarily in Asia, has increased trans-Pacific imports at the Port of Oakland and other ports of entry. The recent weakness in the dollar has led to faster growth in exports than imports in 2007, but the Port's continued strength in exports leaves it well positioned for the future with a healthy balance between exports and imports. The Port anticipates continuing to grow at four to five percent annually, reaching between five and six million TEUs around 2020- 2025. See Exhibit A.

Eight container terminals and two intermodal rail facilities currently serve the Port. The Union Pacific (UP) and BNSF railroad facilities are located adjacent to the heart of the marine terminal areas to provide a reliable and efficient movement of cargo between the marine terminals and the intermodal rail facilities. UP's existing intermodal rail facility at the Port is the "Railport Oakland" and BNSF's intermodal rail facility at the Port is the "Oakland International Gateway" (OIG). The rail facilities also serve regional or "transload" warehouse facilities. (Container goods are unloaded, sorted, consolidated and sometimes stored for short periods of time).

Current TEU capacity at the Port is for 700,000 lifts (1 million TEUs) per year. The Port will need capacity to accommodate an additional 2 million TEUs per year to meet the projected rail need of 3 million TEUs per year around 2020-2025. The Port seeks to respond with high priority rail development projects, coordinated with railroads and shipping lines. One element of the rail development is OHIT.

B. Project scope, function and anticipated benefits.

The proposed OHIT project will provide two rail yards, each with six 4,000-foot long loading tracks and wide-span electric powered rail mounted cranes for container handling over each track group. OHIT will also provide twelve 4,000-foot long storage tracks and container buffer areas with container stack capacity of 18,000 TEUs, lead tracks near West Grand Avenue and tail tracks extending south of 7th Street, truck gates at two locations along Maritime Street, and an Administrative/Operations building, parking and maintenance buildings.

OHIT will allow the railroads to load and unload containers more efficiently, and will help address the portwide intermodal throughput goal. OHIT also will relieve congestion on rail main lines adjacent to the

Port. In addition, OHIT will generate environmental benefits for our region and the state by providing the capability of moving more goods by rail rather than by trucks. OHIT will also benefit the Port and community by bringing continued trade growth and economic benefits to the region, including support for jobs in the region's and state's important technology and agricultural sectors and business and employee payments to local and state tax revenues. See a map of OHIT in Exhibit B.

C. Project satisfies TCIF screening criteria

Eligibility: Included in appropriate adopted regional goods movement or transportation plan and has commitment of 1:1 funding match.

- Project is included in GMAP, Cal-MITSAC, trade infrastructure and goods movement plans adopted by regional transportation planning agencies, or an adopted regional transportation plan.

Project	GMAP	Cal-MITSAC	Adopted Regional Goods Movement Plan	RTP
OHIT	X pp. V-4, V-23	X pg. 81	X	X Proj # 22760

\*\*\*\*\*Check the box if Project is identified in the above plan.\*\*\*\*\*

Many of the regional transportation planning agencies in Northern California, led by the Metropolitan Transportation Commission, Sacramento Area Council of Governments (COG), San Joaquin COG, and Stanislaus COG have worked together to develop a Northern California Trade Corridors Strategy. This strategic vision, coupled with a specific program of projects, aims to address the growing needs of goods movement along the primary trade corridors in Northern California. The coalition is also supported by the six remaining Councils of Government in the Central Valley, including Kern County, the Ports of Oakland, Stockton and Sacramento, and business leaders from throughout Northern California. This coalition identified OHIT as a top tier priority for Northern California for the TCIF program.

- Specific description of entire cost

Project	Total project cost	TCIF request	Identified matching funds	State of matching funds*	Match source	Other funding	Source
OHIT	\$325 million	\$162.5 million	\$162.5 million	Approved by Port	Port and railroads		

\*If match is in any way questionable, identify issues here.

The commitment to match the TCIF funds will come from the railroads. The Port of Oakland is currently discussing the details of a match with the railroads and anticipates being able to provide further information within the prescribed time frame. The Port will also contribute funds toward any necessary utility relocations and site preparation.

- Description of public benefit

The Port has been deepening its harbor to accommodate the newer, larger vessels. Along with the terminal enhancements the Port has made, this has positioned the Port to be able to bring in first port-of-



call vessels which enable more cargo to flow through the Port's facilities. However, to allow these improvements to deliver jobs, tax revenue and other benefits to the region and the state, the Port and the Railroads must also implement landside access improvements, such as OHIT. In addition, OHIT will enhance the following public benefits provided by the Port.

**Job Growth.** The Port of Oakland supports a significant economic base in the region. In addition to direct jobs at the waterfront, transportation workers, warehouses and retailers all are stimulated by the success of the commercial seaport.

**Lower Cost Goods.** The people of the state of California benefit from additional freight rail capacity. The intermodal terminal in Oakland will help reduce the cost of goods shipped to and from Oakland, helping to reduce the cost of products on store shelves, and the cost of exported products to foreign markets.

**Regional Traffic Congestion.** Keeping much of the Port traffic confined to the Port and the rail network that serves the Port keeps trucks off the road and allows the roads to move more efficiently. Adding more and more trucks only slows down our highways and everyone else who are on them.

**Air Quality Benefits.** Rail transport produces less CO<sub>2</sub>, less particulate matter and less nitrogen oxides than trucks on a ton-mile basis. The state will be able to breathe a little easier with more of our freight moving on the railroad instead of the highway.

**Deliverability:** See also Gant Chart in Exhibit C

Construction is anticipated to begin in mid-2011, with completion by the end of 2013. Potential project risks include potential weakness in market demand for additional intermodal rail services. If Port growth were to stagnate, capital outlays such as the OHIT project would be less viable. Though cyclical ups and downs are common, such as the nearly flat Port performance in 2007, but the medium and long term trends point towards continued annual growth.

Environmental Contamination is a potential risk to project cost. Unforeseen contamination on the site may drive up project costs and induce potential schedule delays. However, the Port has jointly purchased an insurance policy with the City of Oakland to limit the Port's exposure to unforeseen conditions within the site. On-going investigations and remediations have not found any unforeseen conditions. Though environmental remediation areas exist on the site, they have not been more significantly more extensive than anticipated.

D. Project addresses the TCIF evaluation criteria.

1. Freight System (Goods Movement)

- Throughput: Project provides for increased volume of freight traffic through capacity expansion or operational efficiency.

OHIT provides the possibility of expanding Railport and developing an additional storage yard for Railport with the elimination of UPRR's West Oakland yard. The OIG is provided enhanced rail access via new dual lead tracks with significantly enhanced alignment. OIG could be expanded in the future by placing tracks between existing yard tracks.

**100% grounded container storage trackside:** Rather than store containers on chassis in a parking lot adjacent to the loading track(s), the containers can all be densely stored in stacks adjacent to the tracks.

This is an efficient use of property, allowing for more loading tracks to be placed in the terminal without sacrificing performance

High trackside container buffer capacity (over 10,000 TEU) directly impacts capacity. Containers are often brought to the yard hours before the railroad is ready to load the container onto a train. In a perfect world, container handling would be a ballet where as soon as the container is brought to the railyard, it is placed on the train. But because of the high volumes of cargo handled, a single delayed container would make the whole system delayed. So the yard must have the ability to stage containers before or after they are loaded/unloaded from the train. Container storage capacity is often a limiting element to capacity. The proposed intermodal terminal will have a large trackside buffer storage area, dramatically increasing the intermodal container staging area over the existing Port intermodal facilities.

- Velocity: Project increases the speed of freight traffic moving through the distribution system.

Multiple tracks under wide-span Rail Mounted Gantry (RMG) cranes (6 tracks per crane set): With a crane spanning only a single track, it cannot perform work while the train is being moved to/from the loading area. The crane that spans multiple tracks is much more productive. It can unload a train on one track while a different track is being switched out for maintenance or departure for its destination. Each crane can operate more efficiently, loading and unloading more containers per day than the existing terminal rail terminals.

Nested RMG cranes handle truck interface to buffer, resort the stacks: The proposed terminal includes multiple crane sets, one to manage the train loading, and a second crane to manage the container buffer area, including most of the trucks arriving from (or departing to) the marine terminals. Since the marine terminals operate only 8-10 hours per day, the cranes dedicated to the buffer area will be able to handle the heavy truck traffic during the day and arrange the containers so that the crane servicing the tracks will not have to dig through 4 containers to reach one at the bottom of the stack. This will improve the train loading/unloading operations, while minimizing the service time for trucks running back and forth between the marine terminal and the railyard.

Cranes can continuously load / unload trains 24 hours per day: The train operations are 24 hours per day, but the marine terminals in Oakland are open only during the day. The large buffer stacks will allow continuous 24 hour per day loading / unloading operations, allowing the railyard to schedule train departures throughout the night, and loading/unloading operations continuously.

Compressed Air distribution system for clean / dry air and fast brake charging: Train brakes are controlled by a compressed air system which is maintained by the locomotive. When the train is in operation, the compressed air must be kept at full pressure. Activation of the brakes is done by releasing the pressure, which applies the brakes. Prior to departure, the locomotive must establish the appropriate compressed air pressure. This can take approximately 2 hours per train to establish. Providing an on-terminal compressed air distribution system will allow the terminal to maintain brake pressure while the train is in the yard, reducing the amount of time each train needs to spend on the terminal.

- Reliability: Project reduces the variability and unpredictability of travel time.

Cantilevered RMG crane arm can reach across container buffer area: The crane can select from many containers for placement onto the train. The larger crane which works with the train, has access to each container in the stack and even some of the street trucks. The versatility of this crane allows it to perform nearly all the functions in the rail yard, reducing its dependence on other equipment to hand the containers to. This reduces the potential delays due to equipment breakdowns or trucker delays.

Cranes are highly productive since there is almost always a track to work: When maintenance or switching activities are happening on a track, the crane can proceed to service a separate train on a separate track. With the crane able to work multiple tracks, it can nearly continuously load and unload trains without interruption from other on-terminal activities. This will ensure that a major maintenance event doesn't prevent the cranes from continuing to be productive.

Live-lift capabilities to directly service trucks using RMG cranes: If a high priority import container arrives, the railyard can identify it at the gate and bypass the buffer system entirely, sending the truck and container directly underneath the crane that services the train. This will allow late arriving containers to be quickly placed on the train, or vice versa, so as not to jeopardize either the ship or train schedule because of late arriving containers.

## 2. Transportation System (Priorities)

- Safety: Project increases the safety of the public, industry workers, and traffic.

17-25 feet between tracks under crane allows maintenance, IBC crew workspace: Wide working spaces will be provided between the loading tracks to allow crews to inspect and maintain the railcars, and remove or place the interbox connectors that secure the top and bottom containers on the train. These wide spaces will allow the railyard staff to operate in a secure work space without encroaching onto adjacent tracks.

GPS tags on crews, locomotives and vehicles can provide safe operations: Workers can be outfitted with GPS devices on their vehicles and persons which the cranes can identify so that the cranes are locked out of worker areas. This will keep workers away from any active loading or unloading operations to protect them from potential hazards around the crane.

Fewer trucks on the highway: If the Port of Oakland doesn't build the Outer Harbor Intermodal Terminal, cargo will continue to arrive in Oakland, or other West Coast ports, and require rail service to its final destination. If new facilities can't be built in Oakland, additional facilities in Northern California may be built to support this cargo, such as the recently constructed intermodal terminals in Lathrop and Stockton. Intermodal cargo may be transported via truck between the Port and the Sacramento/San Joaquin Valleys to intermodal terminals in that region. This would put many more inter-regional trucks on the highway and further strain major truck routes such as I-80 and I-880/238/580. Trucking, as an industry, is not as safe as transport by rail, with more accidents, injuries and fatalities per mile than rail transport. Constructing additional intermodal capacity is best provided at the Port complex, rather than places nearly 100 miles away such as Sacramento and Stockton.

Alternate Intermodal Terminal Location	dist. to Oakland	est. truck trips	Annual VMT
Lathrop	86.1	721,154	62,091,359
Stockton	84.5	721,154	60,937,513
Total		1,442,308	123,028,872

- Congestion Reduction/Mitigation: Project reduces daily hours of delay on the system and improves access to freight facilities.

In 2006, approximately 31% of the Port's total container traffic was transported by rail through its intermodal rail yards. As the Port grows, it anticipates that the percentage of intermodal cargo could increase to approximately 50%. Increasing intermodal transport will reduce the relative volume of Port

containers transported by truck on regional roadways. The existing highway transportation system serving the Bay Area is constrained. Anticipated increases in cargo throughput in the next five to twenty years could induce a considerable amount of truck traffic onto the transportation system. Any cargo that is moved by train from the Port benefits the overall transportation system by reducing truck trips to or from the Port of Oakland.

Every train that is loaded at the Port can eliminate 750 truck trips considering westbound and eastbound cargo, bob-tail moves associated with one-way truck trips, and chassis repositioning required with off-dock transfers. This calculation makes the following assumptions, which are conservative to avoid overestimating truck reduction benefits: eastbound train carries 280 containers, westbound carries 240 containers, bob tail moves add 35% and chassis repositioning adds 10% to the total truck trips. The Port intermodal yards could eliminate over 10,000 truck trips for every 3,500 intermodal containers unloaded and 3,000 intermodal containers loaded at the wharf. Also refer to the table just prior to this section, which indicates that the rail diversion due to OHIT is projected to remove approximately 1.5 million annual truck trips and over 120 million VMT from the regional street and highway network.

100% grounded container storage trackside: The use of a grounded container storage buffer area adjacent to the tracks will reduce, if not eliminate the need for on-terminal yard tractors to shuffle containers to and from the cranes. Rubber Tired Gantry (RTG) cranes require up to 6 tractors each to efficiently load/unload a train. The high capacity of the trackside container stacks eliminates these on-terminal diesel truck movements.

- Key Transportation Bottleneck Relief: Project relieves key freight system bottlenecks where forecasts of freight traffic growth rates indicate infrastructure or system needs are inadequate to meet demand.

The long-term Portwide rail capacity demand is in the range of 3.0 million TEUs. This demand can be addressed by throughput capabilities at the two existing rail facilities combined with the potential capability of the OHIT facility. The existing OIG and Railport facilities handle approximately 1.0 million TEUs. The OHIT facility is estimated to provide approximately 1.8 million TEUs of capacity at full build-out.

The limiting element to growth at the Port of Oakland is intermodal rail service. Shippers continue to demand high volume intermodal service corridors between the Pacific Coast and the middle and eastern United States. Intermodal capacity is much higher in Southern California, however, the intermodal facilities and rail connections are nearing their full capacity. Oakland has seen only limited intermodal capacity growth because of its relatively low capacity to handle intermodal cargo. Construction of the proposed Outer Harbor Intermodal Terminals will provide significant capacity in Oakland to handle a larger share of the international container traffic handled by rail. Greater capacity in Oakland will incrementally reduce congestion in the Los Angeles / Long Beach ports as they have been absorbing the lion's share of intermodal traffic for the entire continent.

- Multi-modal Strategy: Project employs or supports multi-modal strategies to increase port and transportation system throughput while reducing truck vehicle miles/hour traveled (VMT/VHT).

Every train that is loaded at the Port can eliminate 750 truck trips considering westbound and eastbound cargo, bob-tail moves associated with one-way truck trips, and chassis repositioning required with off-dock transfers. This calculation makes the following assumptions, which are conservative to avoid overestimating truck reduction benefits: eastbound train carries 280 containers, westbound carries 240 containers, bob tail moves add 35% and chassis repositioning adds 10% to the total truck trips. The Port intermodal yards could eliminate over 10,000 truck trips for every 3,500 intermodal containers unloaded

and 3,000 intermodal containers loaded at the wharf. In addition, the rail diversion due to OHIT is projected to remove approximately 1.5 million annual truck trips and over 120 million VMT from the regional street and highway network.

- Interregional Benefits: Project links regions/corridors to serve statewide or national trade corridor needs.

OHIT will improve the efficiency of Northern California's freight rail service, which is part of the transcontinental freight rail system. This will decrease the burden borne for such service by Southern California ports and communities, while increasing the West Coast's ability to accommodate increased transcontinental freight rail traffic. The rail diversion due to OHIT is projected to remove approximately 1.5 million annual truck trips and over 120 million VMT from the regional street and highway network.

OHIT will provide Port and railroads with the capacity to handle shuttle trains moving containers between the Port and logistics centers that are increasingly locating in California's Central Valley, where land is available and affordable. Such movement will divert container movement by over-the-road trucks. Increased movement of containerized traffic provided by trains to these Central Valley cargo handling facilities will also provide more jobs and income for California, both at the Port and at the Valley locations.

OHIT provides the capacity at the Port to create an alternative to long-haul movement by truck over state roads and highways, having a cumulative effect of reducing wear on the state's surface infrastructure as well as contributing to improved roadway safety and reduced congestion and diesel air emissions.

### 3. Community Impacts

- Air Quality Impact

With development of intermodal terminal enhancements, the Port of Oakland will be prepared to efficiently handle intermodal cargo growth through the foreseeable planning horizon while minimizing environmental impacts.

The Port evaluated emission benefits (e.g. reductions) associated with two 'green' technologies: (1) electric cargo handling cranes and (2) genset or 'low emission' engines for switching locomotives. Implementation of the electric cranes component is contingent upon the Port receiving anticipated funding from the Air Emissions Fund of the Infrastructure Bond program. Full implementation of the gensets will depend on the success of the pilot program that is currently underway. In addition, the Port evaluated emission benefits for the OHIT relative to the alternative drayage of cargo to the BNSF and UP rail yards in Stockton and Lathrop. The Port did not evaluate the benefits of the OHIT relative to trucking cargo to the Midwest, because we do not believe this is a meaningful comparison.

This project will provide significant regional air quality benefits due to the avoidance of emissions from potential over-the-road and bobtail trucks associated with transporting cargo by truck to its final destination or to the nearest (non-Oakland) railyard. Further, all proposed OHIT equipment - the electric rail mounted cranes and genset switchers - represent the cleanest available technology for the movement of containers between drayage trucks and railcars, and on rail within the facility. The on-site cargo handling equipment will be approximately 90% cleaner than conventionally powered cranes and yard tractors, in terms of particulate emissions (including diesel), and will also avoid emissions of other criteria pollutants, including NO<sub>x</sub>, CO, ROG, as well as CO<sub>2</sub>. The genset switchers emit approximately 80% less particulate matter than typical switchers, and their use will also avoid emissions of other pollutants, as described above.

Finally, the design of the OHIT includes state of the art features (such as the entrance/exit gate system) that allow for efficient and timely movement of drayage trucks, and therefore avoid queuing and idling emissions. The layout of the site and selection of equipment yield a facility design that avoids, to the maximum extent possible, growth in air pollutant emissions.

Exhibit D provides preliminary estimates of the emission benefits (i.e. avoided emissions) for several pollutants of concern. The Port is currently waiting on further guidance from CARB about how best to define and quantify project air quality benefits; therefore, these estimates presented in Exhibit D are draft and subject to change.

- Community Impact Mitigation

OHIT will be operated using state of the art equipment to reduce the emissions generated at the facility. This is a critical issue for the neighboring West Oakland community. There are two viable options to constructing the OHIT facility each providing differing levels of operation upon completion. OHIT could be constructed and made operational all at once providing 100% of the rail capacity or it could be constructed in two phases providing 50% initial rail capacity. In either case, the OAB site lends itself well to constructing a majority of the facility without impacting surrounding property.

Prior to construction of the OHIT, the Port will establish a 15 acre parcel within the development for local truck parking and trucking related services. The 15 acre parcel will be provided in combination with a similar sized parcel adjacent to the Port of Oakland within the City of Oakland's East Gateway portion of the former Oakland Army Base. The combined 30 acres of truck parking will help to minimize the number of truck related businesses in surrounding residential communities.

The Port has also implemented a Truck Management Plan, which includes grants to truckers for the purchase of cleaner burning diesel engines that meet today's emissions standards. This program helps to reduce smog from older, higher pollution truck engines with more efficient, less polluting new vehicles. This program reduces the pollutants produced at the Port from older trucks.

- Economic/Job Growth

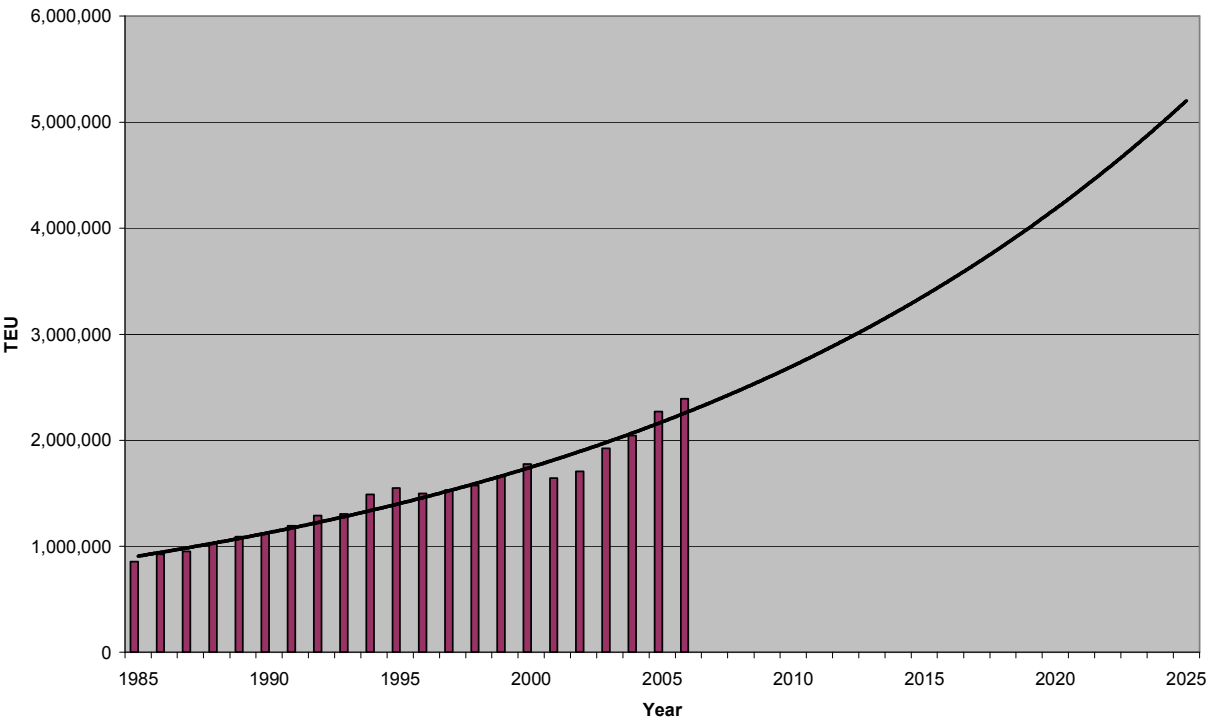
Over the last few years, the Port of Oakland has been deepening its harbor to accommodate the latest generation of larger container shipping vessels. Along with recent Port-funded terminal enhancements, including redevelopment of former military facilities, the harbor deepening has positioned the Port to be able to bring in first port-of-call vessels that enable more cargo to flow through the Port's facilities. Construction and operation of the proposed Outer Harbor Intermodal Terminal (OHIT) to move cargo through the region to and from other parts of the country by rail will directly support those projects to deliver jobs, tax revenue and other benefits to the region and the state.

Construction of the OHIT project is anticipated to require hundreds of construction workers for a period of approximately three years. Local residents in the communities surrounding the Port and the region will benefit the most from employment in the construction jobs needed to build the rail yard. Operation of the OHIT will support a wide range of maritime industry jobs, including railroad, ILWU longshore, trucking, tug companies, freight forwarders and shipping agents, warehousing, container repair and leasing, ship pilots and terminal employees. Furthermore, the OHIT will benefit the Port and community by bringing continued trade growth and economic benefits to the region, including support for jobs in the region's and state's important technology and agricultural sectors and business and employee payments to local and state tax revenues.

To ensure that local residents benefit from growth in international trade, the Port's Employment Resources Development Program (ERDP) conducts extensive outreach to match Oakland residents with jobs provided by Port tenants. ERDP staff work closely with local job seekers to improve their skills and provide training opportunities. In addition to providing employment services, ERDP also helps educate local youth on Port development and career opportunities by coordinating with schools and training programs for internships within the Port. To promote career opportunities in logistics and transportation, ERDP works with the Chambers of Commerce, local government, education and community agencies to address specific issues related to workforce and economic development. See Exhibit E for more information regarding economic impacts of OHIT.

**EXHIBIT A**

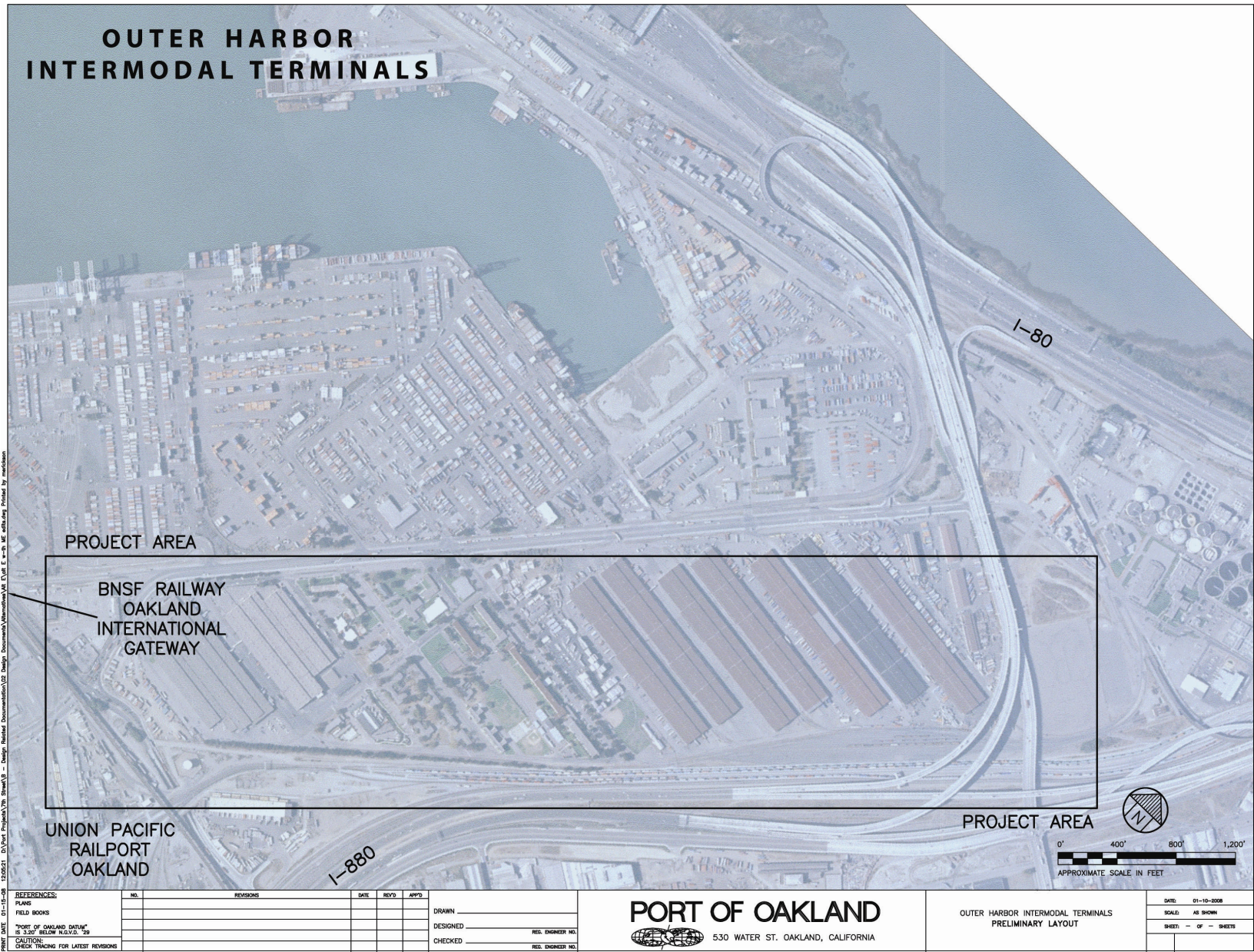
Port of Oakland Container Thruput History (1985-2006)  
and 2025 Forecast





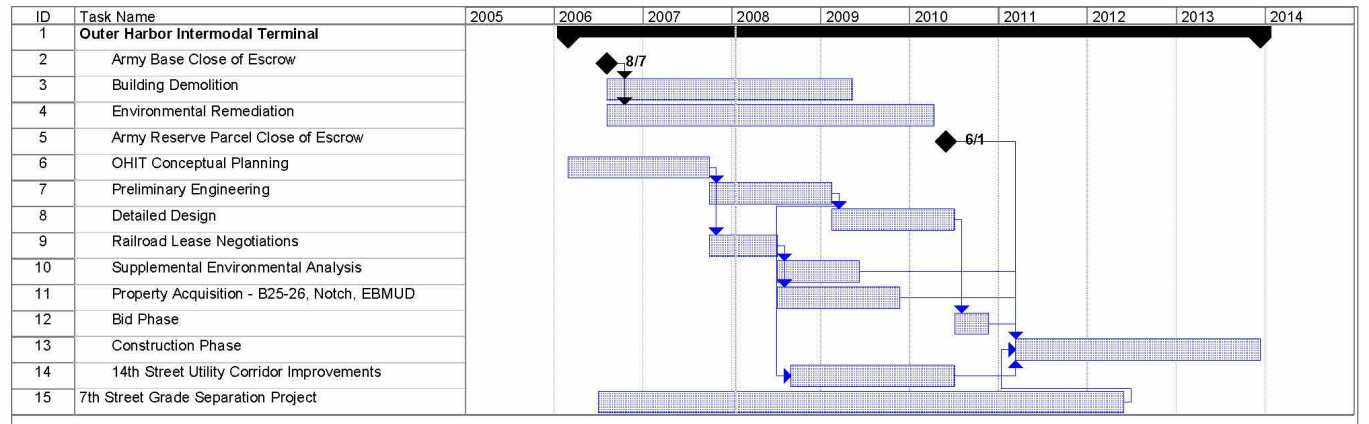
**EXHIBIT B**

**OHIT MAP**



## EXHIBIT C

### PROJECT SCHEDULE



## **EXHIBIT D**

### **AIR POLLUTION MITIGATION**

Exhibit D provides preliminary estimates of the emission benefits (i.e. avoided emissions) for several pollutants of concern. The Port is currently waiting on further guidance from CARB about how to best define and quantify project air quality benefits; therefore, these estimates presented in Appendix D are draft and subject to change.

**Table 1.** Estimated diesel fueled RTG crane emissions with full ARB rule implementation at 191,658 lifts and emissions at OHIT capacity activity levels in 2030.

		ROG	CO	NOX	PM10	PM2.5	SOX
<b>Cumulative from 2015 – 2030</b>	<b>Totals (tons)</b>	<b>6</b>	<b>113</b>	<b>31</b>	<b>1.2</b>	<b>1.1</b>	<b>1</b>

Note: The calculated emission benefits are above and beyond those expected to come from implementation of the Cargo Handling Equipment Rule.

**Table 2.** Cranes fuel consumption and CO2 emissions.

	Fuel (gallons)	CO2 (tons)
<b>Cumulative total from 2015 – 2030</b>	<b>6,758,850</b>	<b>76,502</b>

Note: The calculated emission benefits are above and beyond those expected to come from implementation of the Cargo Handling Equipment Rule.

**Table 3** Switching locomotive emissions at 191,658 lifts and with future operations levels at OHIT.

	<b>HC (tons/year)</b>	<b>CO (tons/year)</b>	<b>NO<sub>x</sub> (tons/year)</b>	<b>PM (tons/year)</b>	<b>CO<sub>2</sub> (tons/year)</b>
Cumulative 2015 thru 2030	<b>40 (ROG = 49)</b>	<b>56</b>	<b>1,829</b>	<b>19.2</b>	<b>17,695</b>

ROG is 1.21 times HC

**Table 4** Forecasted emission reductions (tons/year or tons over 16 year project life) with rail in place of truck drayage.

	<b>Emissions (TPY)</b>				
	<b>ROG</b>	<b>CO</b>	<b>NO<sub>x</sub></b>	<b>PM10</b>	<b>CO<sub>2</sub></b>
Average Cumulative from 2015 – 2030	194	1,121	504	79.3	1,746,312

**EXHIBIT E**

**ECONOMIC BENEFITS OF OHIT**

Job Category	Number Generated
Direct jobs	3,773
Induced jobs	5,152
Indirect jobs	3,437
Total jobs	12,362

Income Category	Dollars (millions)
Direct personal earnings	\$169.1
Respending and consumption	\$456.9
Indirect income	\$141.8
Total income	\$767.8

Direct Local Economic Impact	Dollars (millions)
Business revenue	\$1,582.2
Local purchases	\$375.8
State & local taxes	\$79.1





# 2008 Project Programming Request

## (Project Information)

General Instructions

<input checked="" type="checkbox"/> New Project		<input type="checkbox"/> Amendment (Existing Project)		Date:	
Caltrans District	EA	PPNO	MPO ID	TCRP No.	
04					
County	Route/Corridor	Project Sponsor/Lead Agency		MPO	Element
ALA		Port of Oakland			
<b>Project Title</b>					
Outer Harbor Intermodal Terminals (OHIT)					
PM Bk	PM Ahd	Project Mgr/Contact	Phone	E-mail Address	
<b>Location, Project Limits, Description, Scope of Work, Legislative Description</b>					
OHIT, a proposed intermodal rail terminal complex, is planned to be located on 160 acres of the former Oakland Army Base, now part of the Port of Oakland. OHIT will provide two rail yards, twelve 4,000-foot long loading tracks with rail mounted cranes, twelve 4,000-foot long storage tracks and container buffer areas with container stack capacity of 18,000 TEUs, and lead and tail tracks.					
Component	Implementing Agency		AB 3090	Letter of No Prejudice	
PA&ED	Port of Oakland		<input type="checkbox"/>	<input type="checkbox"/>	
PS&E	Port of Oakland		<input type="checkbox"/>	<input type="checkbox"/>	
Right of Way	Port of Oakland		<input type="checkbox"/>	<input type="checkbox"/>	
Construction	Port of Oakland		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Legislative Districts</b>					
Assembly: 16		Senate: 9			
Congressional: CA 9th					
<b>Purpose and Need</b>					
Current TEU capacity at the Port is for 700,000 lifts (1 million TEUs) per year. The Port will need capacity to accommodate an additional 2 million TEUs per year to meet the projected rail need of 3 million TEUs per year around 2020-2025. The Port seeks to respond with high priority rail development projects, coordinated with railroads and shipping lines. The most significant element of this rail development is OHIT.					
<b>Project Benefits</b>					
OHIT will allow the railroads to load and unload containers more efficiently, and will help address the portwide intermodal throughput goal. OHIT also will relieve congestion on rail main lines adjacent to the Port. In addition, OHIT will generate environmental benefits for our region and the state by providing the capability of moving more goods by rail rather than by trucks.					
<b>Project Milestone</b>					<b>Date</b>
Project Study Report Approved					07/31/02
Begin Environmental (PA&ED) Phase					01/01/02
Circulate Draft Environmental Document			Document Type	EIR	04/29/02
Draft Project Report					10/03/07
End Environmental Phase (PA&ED Milestone)					06/30/09
Begin Design (PS&E) Phase					09/01/07
End Design Phase (Ready to List for Advertisement Milestone)					06/30/10
Begin Right of Way Phase					06/30/08
End Right of Way Phase (Right of Way Certification Milestone)					12/01/09
Begin Construction Phase (Contract Award Milestone)					03/01/11
End Construction Phase (Construction Contract Acceptance Milestone)					12/31/13
Begin Closeout Phase					12/31/13
End Closeout Phase (Closeout Report)					06/30/14

**2007 TCIF Funding Nomination for**  
**the Martinez Subdivision and Rail Improvements (Martinez)**  
**submitted by Port of Oakland**

A. Project description and background (including purpose and need).

The Martinez Subdivision (Martinez) consists of the Union Pacific Railroad (UP) Right-of-Way (ROW) from the railroad terminals at the Port of Oakland (Port) to the Suisun Bay railroad bridge spanning the Carquinez Strait (Railroad mile post (mp) 2.75 through mp 31.0). The actual proposed project runs along the Martinez Subdivision from the northern yard limits in Oakland (mp 2.75), through Stege in the city of Richmond (mp 9.35).

The purpose of the Martinez Subdivision Rail Improvements is to increase the capacity of the main line system between the Port of Oakland at Milepost 2.75, and Stege in Richmond at Milepost 9.35. This reach is key to the capacity of the entire Martinez Subdivision system which runs from Oakland to the Suisun Bay Bridge near Milepost 35. Through this short corridor the UP, Burlington Northern /Santa Fe (BNSF) and Amtrak run over 66 trains per day over two mainline tracks. The congestion and delays to all users can be severe. The Martinez Subdivision project will ensure that the railroads can continue to handle their current 30% share of the Port of Oakland container traffic and the anticipated growth to a 50% share, without bringing gridlock to the corridor. Local Port capacity improvements such as the Outer Harbor Intermodal Terminal, will have only a limited benefit if arrivals and departures on the Martinez Subdivision are constrained by the high level of traffic on the main lines.

The Port of Oakland's cargo volume makes it the fourth busiest container port in the United States, handling 99% of the waterborne goods moving through Northern California, the nation's sixth largest metropolitan market. The Port has been, and continues to be, the premier export seaport for California's agricultural goods from the Central Valley and the wine country. However, imports have grown by over 80% between 2001 and 2006, nearly 8 times faster than the growth in exports. The outsourcing of manufacturing to foreign countries with low labor costs, primarily in Asia, has increased trans-Pacific imports at the Port of Oakland and other ports of entry. The recent weakness in the dollar has led to faster growth in exports than imports in 2007, but the Port's continued strength in exports leaves it well positioned for the future with a healthy balance between exports and imports. The Port anticipates continuing to grow at four to five percent annually, reaching between five and six million TEUs around 2020- 2025. See Exhibit A.

Eight container terminals and two intermodal rail facilities currently serve the Port. The UP and BNSF railroad facilities are located adjacent to the heart of the marine terminal areas to provide a reliable and efficient movement of cargo between the marine terminals and the intermodal rail facilities. UP's existing intermodal rail facility at the Port is the "Railport Oakland" and BNSF's intermodal rail facility at the Port is the "Oakland International Gateway" (OIG). The rail facilities also serve regional or "transload" warehouse facilities. (Container goods are unloaded, sorted, consolidated and sometimes stored for short periods of time).

Current intermodal capacity at the Port is for 700,000 lifts (1 million TEUs) per year. The Port will need capacity to accommodate an additional 2 million TEUs per year to meet the projected rail volume of 3 million TEUs per year around 2020-2025. The Port seeks to respond with high priority rail development projects, coordinated with railroads and shipping lines. One element of the rail development is the Martinez Subdivision.

B. Project scope, function and anticipated benefits.

The Martinez Subdivision (Martinez) consists of the UP Right-of-Way (ROW) from the railroad terminals at the Port of Oakland (Port) the Suisun Bay railroad bridge spanning the Carquinez Strait (Railroad mile post (mp) 2.75 through mp 31.0). It currently serves the UP, BNSF and Amtrak. There are approximately 18 to 20 cargo trains per day on the system; however that number is expected to double by 2020. There are also currently 44 passengers' trains per day on the system.

The proposed project includes the addition of two additional mainline tracks from the Port of Oakland (milepost 2.75), to Stege in Richmond (milepost 9.35). The additional two mainline tracks will add the capacity to the system to allow the additional 22 freight trains per day anticipated by 2020. Further, the four tracks will open the possibility of dedicating one track to the passenger rail service, which will greatly enhance the movement of both passengers and cargo throughout the Martinez Subdivision. Doubling the current number of mainline tracks through the most congested portion of the corridor should close to double current capacity.

The project will also construct a numerous crossovers and additional signaling. Retaining walls would also need to be built to support the additional tracks. Further, in order to construct the Martinez Improvements, a number of utility corridors will need to be moved or strengthened and a portion of the Amtrak station in Emeryville will need to be relocated. Key to the capacity of the Martinez will be long and well designed tail tracks and switch leads (connections to the Oakland rail yards) to allow smooth transitions from the rail and storage yards, to the mainline Martinez system.

Currently, Amtrak runs as many as 44 trains per day while the remaining 22 trains are comprised of both the UP and BNSF trains. Although the Amtrak trains are relatively small, they move fast and need to keep to a specific schedule. The cargo trains are much longer and move slower. Having both types of trains on the same system makes it difficult to manage the needs of all the users. The nature of the longer slower trains and the smaller faster trains causes congestion. In the near future, it is anticipated that the container cargo traffic from Oakland will more than triple. The trains will get longer (from the current 5,000 ft to as much as 8,000 ft) and there will be more cargo trains (from 22, to 44 or more).

The Oakland to Stege is particularly problematic because all three railroads use this segment. Beyond Stege, the UP and Amtrak are the primary users. There are BNSF trains beyond Stege, but the majority of the BNSF traffic could enter and exit the system at Stege, which would reduce traffic on the Martinez (although running through Richmond is problematic), so traffic could generally be reduced beyond that point. The proposed Martinez improvements, between Stege and Oakland, are critical regardless of where the BNSF gets off the Martinez system.



Additional improvements beyond Stege may be necessary in the future depending if the BNSF and UP can agree on a better location for the BNSF to get off the Martinez system. See a map of the Martinez Subdivision in Exhibit B.

C. Project satisfies TCIF screening criteria

Eligibility: Included in appropriate adopted regional goods movement or transportation plan and has commitment of 1:1 funding match.

- Project is included in GMAP, Cal-MITSAC, trade infrastructure and goods movement plans adopted by regional transportation planning agencies, or an adopted regional transportation plan.

<b>Project</b>	<b>GMAP</b>	<b>Cal-MITSAC</b>	<b>Adopted Regional Goods Movement Plan</b>	<b>RTP</b>
Martinez Subdivision	X pp. V-4, V-23	X Jan 07, pg. 81		X proj # 22089

\*\*\*\*\*Check the box if Project is identified in the above plan.\*\*\*\*\*

Many of the regional transportation planning agencies in Northern California, led by the Metropolitan Transportation Commission, Sacramento Area Council of Governments (COG), San Joaquin COG, and Stanislaus COG have worked together to develop a Northern California Trade Corridors Strategy. This strategic vision, coupled with a specific program of projects, aims to address the growing needs of goods movement along the primary trade corridors in Northern California. The coalition is also supported by the six remaining Councils of Government in the Central Valley, including Kern County, the Ports of Oakland, Stockton and Sacramento, and business leaders from throughout Northern California. This coalition identified the Martinez Subdivision as a top tier priority for Northern California for the TCIF program.

- Specific description of entire cost

<b>Project</b>	<b>Total project cost</b>	<b>TCIF request</b>	<b>Identified matching funds</b>	<b>State of matching funds*</b>	<b>Match source</b>	<b>Other funding</b>	<b>Source</b>
Martinez Subdivision	\$215 million	\$107.5 million	\$107.5 million	Approved by Port	Railroads		

The commitment to match the TCIF funds will come from the railroads. The Port of Oakland is currently discussing the details of a match with the railroads and anticipates being able to provide further information within the prescribed time frame.

- Description of public benefit

The Port has been deepening its harbor to accommodate the newer, larger vessels. Along with the terminal enhancements the Port has made, this has positioned the Port to be able to bring in

first port-of-call vessels which enable more cargo to flow through the Port's facilities. However, to allow these improvements to deliver jobs, tax revenue and other benefits to the region and the state, the Port and the Railroads must also implement landside access improvements, such as the Martinez Subdivision. In addition, Martinez will enhance the following public benefits provided by the Port.

**Job Growth.** The Port of Oakland supports a significant economic base in the region. In addition to direct jobs at the waterfront, transportation workers, warehouses and retailers all are stimulated by the success of the commercial seaport. The growth of the Port is dependent on the ability to increase capacity, especially intermodal rail which is projected to grow significantly throughout the west coast over the next 10 to 15 years.

**Lower Cost Goods.** The people of the state of California benefit from additional freight rail capacity. Faster and more reliable movement of goods through Oakland will help reduce the cost of goods shipped to and from Oakland, helping to reduce the cost of products on store shelves, and the cost of exported products to foreign markets.

**Regional Traffic Congestion.** Keeping much of the Port traffic confined to the Port and the rail network that serves the Port keeps trucks off the road and allows vehicular traffic on the roads to move more efficiently. Adding more and more trucks only slows down our highways and everyone else who is on them. In addition, increasing capacity to the Martinez will greatly improve the service and dependability of the Amtrak passenger rail service along the corridor.

**Air Quality Benefits.** Rail transport produces less CO<sub>2</sub>, less particulate matter and less nitrogen oxides than trucks on a ton-mile basis. The state will be able to breathe a little easier with more of our freight moving on the railroad instead of the highway.

**Deliverability:** See also Gant Chart in Exhibit C

The Martinez Subdivision project completed the preliminary engineering phase in May 2007, through joint discussions between BNSF, UP and the Port of Oakland. Based on the results of the preliminary engineering study, ROW surrounding the Martinez Subdivision, and the level of build-out of the adjacent properties through Oakland, Emeryville and Berkeley limited the ability to acquire additional land for track expansion. The design team determined that the OHIT project design would have to be further developed to address access to and from the main lines, considering the ROW restrictions. The OHIT-Martinez connection is expected to have an approved design in early 2008, with capacity modeling and cost-benefit analysis to follow immediately.

Multiple utilities, including fiber optic and fuel pipelines run through the railroad ROW. Prior to construction of the new track work, these utilities must be relocated or protected in place. Limited property acquisition will be required, specifically around Aquatic Park in Berkeley, and adjacent to the EBMUD wastewater treatment plant in Oakland. Construction is anticipated to approximately 3 years, and will commence in 2012.

D. Project addresses the TCIF evaluation criteria.

1. Freight System (Goods Movement)

- Throughput: Project provides for increased volume of freight traffic through capacity expansion or operational efficiency.

If the Port of Oakland continues to grow at its stable 4-5% cumulative annual growth rate, the intermodal rail carriers must be able to grow their intermodal rail service accordingly. The additional cargo can be handled by more trains, longer trains or a combination of the two. The railway is currently at or near capacity. The Port anticipates increasing the intermodal fraction of cargo from approximately 31% today to 50% by 2025, more than tripling the volume of cargo handled by rail to 3 million TEU. Even if the railroads were to increase their train carrying capacity by 50%, the Port will still experience more than twice as many intermodal trains through the Port complex and the UP main line.

If the Port cannot successfully secure the rail capacity, then more of this traffic will be routed by to other congested gateway Ports on the continent, or the cargo will be shipped by truck to regional intermodal terminals in the Stockton area, further impacting the regional highway network.

- Velocity: Project increases the speed of freight traffic moving through the distribution system.

The Martinez project will not increase velocity, rather, it will mitigate the potential decrease in velocity due to congestion on the corridor. While not yet quantified, the potential increase in delay would result in a reduction in the fraction of containers brought in and out of the Port complex by train, increasing the volume of containers brought in and out of the Port by truck.

Once the approximately 10 to 15 BNSF trains leave the Martinez Subdivision, congestion is greatly reduced. Over this section of track, speeds can exceed 35 miles per hour. However, the current heavy congestion prevents maximum speed and efficiency. Increasing the numbers of trains without commensurate increases in the mainline capacity will lead to even greater delays and perhaps complete shut downs greatly increasing impacts to the local community and environment.

- Reliability: Project reduces the variability and unpredictability of travel time.

In order to optimize cargo movement from Oakland, the railroads need to be able to move double-stacked cargo trains in the range of 8,000 feet in length. The current 2-mainline configuration of the Martinez Subdivision is not capable of moving the approximately 40 8,000 ft long cargo trains as well as an equal number of smaller, but faster passenger trains. Increasing the mainline capacity to the point that the BNSF moves off the Martinez system and onto their own transcontinental rail line at Richmond by running through (or eventually around) Richmond is necessary to avoid unexpected blockages and accompanying delays.

## 2. Transportation System (Priorities)

- **Safety:** Project increases the safety of the public, industry workers, and traffic.

As currently projected, there will be an additional 20 trains per day on the Martinez. The risk to the public from these additional trains will be mitigated in two ways. First, the project includes improved signaling which will provide an added layer of safety for the at-grade crossings. In addition, although not part of the overall project, the Port of Oakland is planning a program of funding through various sources, grade separation projects for key at-grade crossings along the Martinez. It is anticipated that as a requirement of providing at-grade crossings, the local municipality would need to remove an additional at grade crossing thereby eliminating two or more at-grade crossings for every grade separation project. In total, this program will greatly reduce the overall risk to the public.

The increase in the number of trains per day will be primarily due to containerized cargo from the Port of Oakland. Although there is some cargo that is considered hazardous, the majority of the cargo being moved will not constitute hazardous cargo. The small percentage of hazardous cargo will be in the form of computer equipment and other types of “low risk” materials. We do not anticipate an increase in the movement of tank cars or other bulk hazardous material moves.

- **Congestion Reduction/Mitigation:** Project reduces daily hours of delay on the system and improves access to freight facilities.

In 2006, approximately 31 percent of the Port’s total container traffic was transported by rail through its intermodal rail yards. As the Port grows, it anticipates that the percentage of intermodal cargo would increase to around 50 percent. Increasing intermodal transport will reduce the relative volume of Port containers transported by truck on regional roadways. The existing highway transportation system serving the Bay Area is constrained. Anticipated increases in cargo throughput in the next five to twenty years could induce a considerable amount of truck traffic onto the transportation system. Any cargo that is moved by train from the Port benefits the overall transportation system by reducing truck trips to or from the Port of Oakland.

Every train that is loaded at the Port can eliminate 750 truck trips considering westbound and eastbound cargo, bob-tail moves associated with one-way truck trips, and chassis repositioning required with off-dock transfers. This calculation makes the following assumptions, which are conservative to avoid overestimating truck reduction benefits: eastbound train carries 280 containers, westbound carries 240 containers, bob tail moves add 35% and chassis repositioning adds 10% to the total truck trips. The Port intermodal yards could eliminate over 10,000 truck trips for every 3,500 intermodal containers unloaded and 3,000 intermodal containers loaded at the wharf. In addition, the rail diversion due to OHIT, which will be optimized by improvements such as Martinez, is projected to remove approximately 1.5 million annual truck trips and over 120 million VMT from the regional street and highway network.

- Key Transportation Bottleneck Relief: Project relieves key freight system bottlenecks where forecasts of freight traffic growth rates indicate infrastructure or system needs are inadequate to meet demand.

The long-term Portwide rail capacity demand is in the range of 3.0 million TEUs. This demand can be addressed by throughput capabilities at the two existing rail facilities combined with the potential capability of the OHIT facility and accompanying downstream rail improvements, such as Martinez. The existing OIG and Railport facilities handle approximately 1.0 million TEUs. The proposed rail improvements are estimated to provide approximately 1.8 million TEUs of capacity at full build-out.

The limiting element to growth at the Port of Oakland is intermodal rail service. Shippers continue to demand high volume intermodal service corridors between the Pacific Coast and the middle and eastern United States. Intermodal capacity is much higher in Southern California, however, the intermodal facilities and rail connections are nearing their full capacity. Oakland has seen only limited intermodal capacity growth because of its relatively low capacity to handle intermodal cargo. Construction of the proposed Martinez Subdivision will provide significant capacity in Oakland to handle a larger share of the international container traffic handled by rail. Greater capacity in Oakland will incrementally reduce congestion in the Los Angeles / Long Beach ports as they have been absorbing the lion's share of intermodal traffic for the entire continent.

- Multi-modal Strategy: Project employs or supports multi-modal strategies to increase port and transportation system throughput while reducing truck vehicle miles/hour traveled (VMT/VHT).

Every train that is loaded at the Port can eliminate 750 truck trips considering westbound and eastbound cargo, bob-tail moves associated with one-way truck trips, and chassis repositioning required with off-dock transfers. This calculation makes the following assumptions, which are conservative to avoid overestimating truck reduction benefits: eastbound train carries 280 containers, westbound carries 240 containers, bob tail moves add 35% and chassis repositioning adds 10% to the total truck trips. The Port intermodal yards could eliminate over 10,000 truck trips for every 3,500 intermodal containers unloaded and 3,000 intermodal containers loaded at the wharf. In addition, the rail diversion due to OHIT, which will be optimized by improvements such as Martinez, is projected to remove approximately 1.5 million annual truck trips and over 120 million VMT from the regional street and highway network.

- Interregional Benefits: Project links regions/corridors to serve statewide or national trade corridor needs.

The Martinez Subdivision Project will improve the efficiency of Northern California's freight rail service, which is part of the transcontinental freight rail system. This will decrease the burden borne for such service by Southern California ports and communities, while increasing the West Coast's ability to accommodate increased transcontinental freight rail traffic.

Martinez will improve velocity of trains passing through the region to and from the Port, thereby creating a reduced impact (noise, congestion, air emissions from waiting vehicles at crossings) upon the communities located along the corridor.

Increased rail throughput allowed by this project will minimize the necessity of trains needing to wait at various locations along the UP mainline to Sacramento and Roseville for congestion to clear in the Oakland vicinity.

Freight trains moving inbound containers to logistics centers in the Central Valley and moving California's valuable agricultural exports to Oakland for shipment overseas will be able to transport goods to their destination more expeditiously.

Both freight and passengers, a number of whom commute daily between the Central Valley and the Bay Area will be able to move more quickly and reliably with the capacity and velocity improvements along the Martinez Subdivision.

### 3. Community impacts

- Air Quality Impact

With development of rail enhancements, the Port of Oakland will be prepared to efficiently handle intermodal cargo growth through the foreseeable planning horizon while minimizing environmental impacts. Although there will be as many as 20 additional trains per day, the amount of cargo being moved for the same impact will be greatly increased. The train length will grow from the current approximate 5,000 ft in length, to closer to 8,000 ft. This will add over 50% more cargo per train for the same air quality impact. We further anticipate that the train engines that will be used will over time be converted to newer and lower emission engines. The trucks themselves and the traffic caused by those additional trucks will cause air quality impacts far in excess of the more efficient rail program.

The Martinez is currently constrained and will be more constrained without additional track improvements. The route is forecasted to have 44 passenger and 22 freight train movements. The benefits of the proposed rail improvements are projected to improve the delays by 1 hour per train. To estimate the environmental air quality benefit of the proposed Martinez improvements, we focused our analysis on total delays as applied to the fleet emission rates at idle. The passenger trains were assumed to have one locomotive per train and freight locomotives were projected to have 3 locomotives per train though often more than 3 per train are used.

The total delay was applied to the fleet average emissions rates at idle calculated for the fleet averages in 2015, 2020, and 2030. Using these emission factors and 110 locomotives (44 passenger and 66 freight locomotives) per day using this corridor each with an hour delay (40,150 locomotive idling hours annually), the total emissions and emission benefits from the rail capacity improvement is shown in Exhibit D.

- Community Impact Mitigation

There are a variety of potential community impacts that could occur due to the project above and beyond the traffic safety impacts that were described above in the section addressing Safety and Air Quality.

Train operators are required by regulation to blow their horns at all at grade crossings and near any limited visibility curve, especially in populated areas. An added benefit to the program of reducing at-grade crossings is that quiet zones can be established along the Martinez where it will no longer be necessary for trains to blow their horns. Depending on the number of at-grade crossings eliminated, long runs of as much as 5 city blocks can be converted to quiet zones.

Traffic will also be mitigated in two ways. First, the grade separation program will eliminate several at-grade crossings which will eliminate some traffic delay that exists today. Further, the Martinez upgrades will help increase train speed and therefore each train will move through the at-grade crossings faster, causing less delay.

Prior to construction of OHIT and the Martinez improvements, the Port will establish a 15 acre parcel within the development for local truck parking and trucking related services. The 15 acre parcel will be provided in combination with a similar sized parcel adjacent to the Port of Oakland within the City of Oakland's East Gateway portion of the former Oakland Army Base. The combined 30 acres of truck parking will help to minimize the number of truck related businesses in surrounding residential communities.

The Port also has implemented a Truck Management Plan, which includes grants to truckers for the purchase of cleaner burning diesel engines that meet today's emissions standards. This program helps to reduce smog from older, higher pollution truck engines with more efficient, less polluting new vehicles. This program reduces the pollutants produced at the Port from older trucks.

- Economic/Job Growth

Over the last few years, the Port of Oakland has been deepening its harbor to accommodate the latest generation of larger container shipping vessels. Along with recent Port-funded terminal enhancements, including redevelopment of former military facilities, the harbor deepening has positioned the Port to be able to bring in first port-of-call vessels that enable more cargo to flow through the Port's facilities. The Port's proposed Outer Harbor Intermodal Terminal (OHIT) rail yard in the Port area will help funnel cargo containers into the freight rail system to minimize the congestion and air quality impacts of trucking. Construction of the Martinez subdivision rail project will provide an essential link to expedite movement of cargo through the region by rail to deliver jobs, tax revenue and other benefits to the region and the state.

Construction of the Martinez subdivision rail project is anticipated to require hundreds of construction workers for a period of approximately three years. Local residents in the

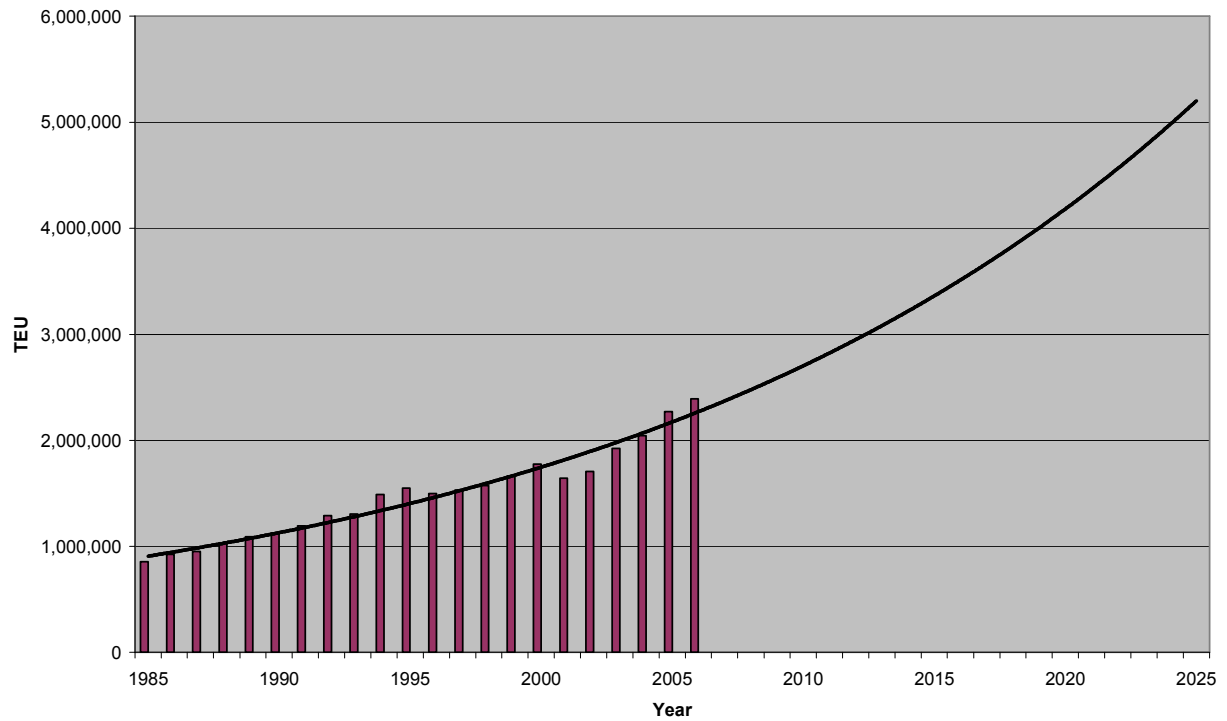
communities surrounding the Port and the region will benefit the most from employment in the construction jobs needed to rebuild and expand the rail line. Rail operations on the Martinez line, which serves the Port of Oakland and Union Pacific rail yards, will support a wide range of maritime industry jobs, including railroad, ILWU longshore, trucking, tug companies, freight forwarders and shipping agents, warehousing, container repair and leasing, ship pilots and terminal employees. Furthermore, the Martinez subdivision rail project will benefit the Port and community by bringing continued trade growth and economic benefits to the region, including support for jobs in the region's and payments to local and state tax revenues.

To ensure that local residents benefit from growth in international trade, the Port's Employment Resources Development Program (ERDP) conducts extensive outreach to match Oakland residents with jobs provided by Port tenants. ERDP staff work closely with local job seekers to improve their skills and provide training opportunities. In addition to providing employment services, ERDP also helps educate local youth on Port development and career opportunities by coordinating with schools and training programs for internships within the Port. To promote career opportunities in logistics and transportation, ERDP works with the Chambers of Commerce, local government, education and community agencies to address specific issues related to workforce and economic development. See Exhibit E for more information regarding economic impacts of Martinez.



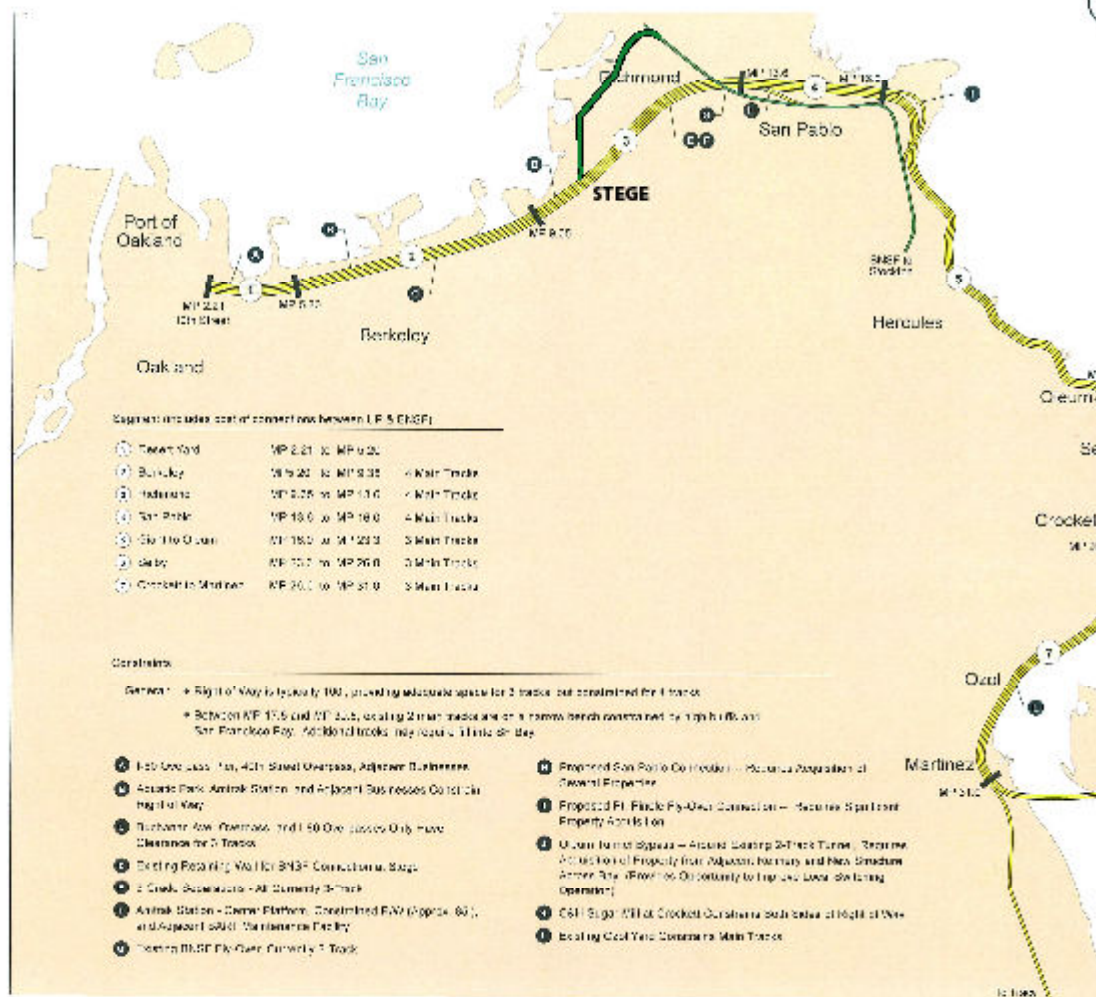
## EXHIBIT A

Port of Oakland Container Thruput History (1985-2006)  
and 2025 Forecast



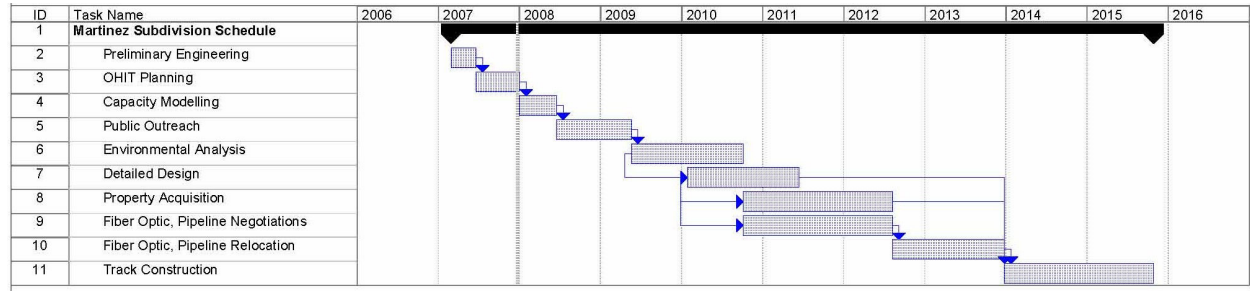
## PROJECT MAP

## MARTINEZ SUBDIVISION RAIL IMPROVEMENTS



# EXHIBIT C

## PROJECT SCHEDULE



## **EXHIBIT D**

### **AIR POLLUTION MITIGATION**

#### **Emissions and benefits of rail capacity improvements**

<b>Calendar Year</b>	<b>Idle Emissions (grams/hour) and Fuel consumption (lb/hr)</b>				
	<b>HC</b>	<b>CO</b>	<b>NO<sub>x</sub></b>	<b>PM</b>	<b>Fuel</b>
2015	48.7	80.7	601	13.3	23.1
2020	33.2	55.2	482	10.2	22.1
2030	14.0	35.7	221	4.2	20.1
<b>Emission benefit (tons/year)</b>					
<b>Calendar Year</b>	<b>HC</b>	<b>CO</b>	<b>NO<sub>x</sub></b>	<b>PM</b>	<b>CO<sub>2</sub></b>
2015	2.2	3.6	26.6	0.6	1,477
2020	1.5	2.4	21.3	0.5	1,413
2030	0.6	1.6	9.8	0.2	1,285
Cumulative Benefit 2015 – 2030	21 (ROG* = 26)	38	299	6.3	22,160

\*ROG is 1.21 times HC

Therefore, referring to the last row of thi table, we can estimate that the proposed project would avoid the emission of 26 tons of ROG, 38 tons of CO, 299 tons of NO<sub>x</sub>, 6.3 tons of PM, and 22,160 tons of CO<sub>2</sub>.

## **EXHIBIT E**

### **ECONOMIC BENEFITS OF THE MARTINEZ SUBDIVISION** **(AS ENHANCEMENT TO OHIT)**

Job Category	Number Generated
Direct jobs	3,773
Induced jobs	5,152
Indirect jobs	3,437
Total jobs	12,362

Income Category	Dollars (millions)
Direct personal earnings	\$169.1
Responding and consumption	\$456.9
Indirect income	\$141.8
Total income	\$767.8

Direct Local Economic Impact	Dollars (millions)
Business revenue	\$1,582.2
Local purchases	\$375.8
State & local taxes	\$79.1



# 2008 Project Programming Request

## (Project Information)

General Instructions

<input checked="" type="checkbox"/> New Project		<input type="checkbox"/> Amendment (Existing Project)		Date:	
<b>Caltrans District</b>		<b>EA</b>		<b>PPNO</b>	
04					
<b>County</b>	<b>Route/Corridor</b>	<b>Project Sponsor/Lead Agency</b>		<b>MPO</b>	<b>TCRP No.</b>
ALA		Port of Oakland			
<b>Project Title</b>					
Martinez Subdivision Rail Improvements					
<b>PM Bk</b>	<b>PM Ahd</b>	<b>Project Mgr/Contact</b>	<b>Phone</b>	<b>E-mail Address</b>	
<b>Location, Project Limits, Description, Scope of Work, Legislative Description</b>					
The Martinez Subdivision consists of the Union Pacific Railroad Right-of-Way from the railroad terminals at the Port of Oakland to the Suisun Bay railroad bridge spanning the Carquinez Strait (Railroad milepost 2.75 through mp 31.0). The proposed project includes the addition of two additional mainline tracks, numerous crossovers and additional singaling from the Port to Stege in Richmond (milepost 9.35).					
<b>Component</b>	<b>Implementing Agency</b>		<b>AB 3090</b>	<b>Letter of No Prejudice</b>	
<b>PA&amp;ED</b>	Port of Oakland		<input type="checkbox"/>	<input type="checkbox"/>	
<b>PS&amp;E</b>	Port of Oakland		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Right of Way</b>	Port of Oakland		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Construction</b>	Port of Oakland		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Legislative Districts</b>					
<b>Assembly:</b> 16		<b>Senate:</b> 9			
<b>Congressional:</b> CA 9th					
<b>Purpose and Need</b>					
The purpose of the Martinez Subdivision Rail Improvements is to increase the capacity of the main line system between the Port of Oakland at Milepost 2.75, and Stege in Richmond at Milepost 9.35. The Martinez Subdivision project will ensure that the railroads can continue to handle their current 30% share of the Port of Oakland container traffic, without bringing gridlock to the corridor. Local Port capacity improvements such as the Outer Harbor Intermodal Terminal, will have only a limited benefit if arrivals and departures on the Martinez Subdivision are constrained by the high level of traffic on the main lines.					
<b>Project Benefits</b>					
The additional two mainline tracks will add the capacity to the system to allow the additional 22 freight trains per day anticipated by 2020. Further, the four tracks will open the possibility of dedicating one track to the passenger rail service, which will greatly enhance the movement of both passengers and cargo throughout the Martinez Sub.					
<b>Project Milestone</b>					<b>Date</b>
Project Study Report Approved					05/30/07
Begin Environmental (PA&ED) Phase					07/01/08
Circulate Draft Environmental Document			<b>Document Type</b> EIR	06/30/09	
Draft Project Report					09/01/09
End Environmental Phase (PA&ED Milestone)					12/31/09
Begin Design (PS&E) Phase					07/01/08
End Design Phase (Ready to List for Advertisement Milestone)					12/31/09
Begin Right of Way Phase					07/01/09
End Right of Way Phase (Right of Way Certification Milestone)					06/30/11
Begin Construction Phase (Contract Award Milestone)					10/01/11
End Construction Phase (Construction Contract Acceptance Milestone)					09/30/14
Begin Closeout Phase					10/01/14
End Closeout Phase (Closeout Report)					03/03/15



# 2008 Project Programming Request

## (Project Information)

General Instructions

<input type="checkbox"/> New Project		<input checked="" type="checkbox"/> Amendment (Existing Project)		<b>Date:</b> 01/14/08	
<b>Caltrans District</b>	<b>EA</b>	<b>PPNO</b>	<b>MPO ID</b>	<b>TCRP No.</b>	
4	0A710	0044C	ALA050019		
<b>County</b>	<b>Route/Corridor</b>	<b>Project Sponsor/Lead Agency</b>		<b>MPO</b>	<b>Element</b>
ALA	880	Alameda County Congestion Management		MTC	CO
<b>Project Title</b>					
I-880 Reconstruction, 29th-23rd Ave, Oakland					
<b>PM Bk</b>	<b>PM Ahd</b>	<b>Project Mgr/Contact</b>	<b>Phone</b>	<b>E-mail Address</b>	
28.6	28.8	Matt Todd	(510)836-2560	MTodd@accma.ca.gov	
<b>Location, Project Limits, Description, Scope of Work, Legislative Description</b>					
In Oakland: I-880, from just south of the existing 29th Ave O/C to just north of the existing 23rd Ave O/C. Improvements to the NB 29th Ave off ramp; Improvements to existing NB on-ramp between 29th and 23rd Aves, including improvements to the NB 23rd Ave off ramp and a new soundwall between 29th and 23rd.					
<b>Component</b>	<b>Implementing Agency</b>		<b>AB 3090</b>	<b>Letter of No Prejudice</b>	
<b>PA&amp;ED</b>	Alameda County Congestion Management Agency		<input type="checkbox"/>	<input type="checkbox"/>	
<b>PS&amp;E</b>	Alameda County Congestion Management Agency		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Right of Way</b>	Alameda County Congestion Management Agency		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Construction</b>	Caltrans/ACCMA		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Legislative Districts</b>					
<b>Assembly:</b> 16		<b>Senate:</b> 9			
<b>Congressional:</b> 9					
<b>Purpose and Need</b>					
A recent Caltrans study identified the 29th/23rd Ave area as a major bottleneck on I-880 due to the existing interchange spacing, ramp geometric configurations, and the limited ability to widen the mainline. The peak hour free flow speed is expected to increase from 30 to 35 mph within the project study area due to the improvements.					
<b>Project Benefits</b>					
Improvements to the 29th Ave northbound off ramp, to the NB 29th Ave on ramp and to the auxiliary lane between 29th Ave and 23rd Ave will improve weaving and operating speed in this section. The improvements are expected to reduce the number of accidents on the northbound mainline lanes.					
<b>Project Milestone</b>					<b>Date</b>
Project Study Report Approved					11/01/07
Begin Environmental (PA&ED) Phase					10/01/08
Circulate Draft Environmental Document			<b>Document Type</b> ND	10/01/09	
Draft Project Report					10/01/09
End Environmental Phase (PA&ED Milestone)					04/01/10
Begin Design (PS&E) Phase					12/01/09
End Design Phase (Ready to List for Advertisement Milestone)					12/01/11
Begin Right of Way Phase					11/01/09
End Right of Way Phase (Right of Way Certification Milestone)					04/01/12
Begin Construction Phase (Contract Award Milestone)					08/01/12
End Construction Phase (Construction Contract Acceptance Milestone)					10/01/15
Begin Closeout Phase					10/01/15
End Closeout Phase (Closeout Report)					02/01/16

## **TRADE CORRIDORS IMPROVEMENT FUND PROJECT NOMINATION**

### **I-880 OPERATIONAL AND SAFETY IMPROVEMENTS AT 29<sup>TH</sup> AND 23<sup>RD</sup> AVENUE OVERCROSSINGS**

#### **1. PROJECT NARRATIVE**

##### **Project Description**

This project proposes to construct operational and safety improvements on Interstate 880 (I-880) at the existing overcrossings of 29<sup>th</sup> Avenue and 23<sup>rd</sup> Avenue in the City of Oakland, California (see Figure 1 Project Location Map).

The existing interchange spacing, ramp geometric configurations and the limited ability to widen the mainline impact freight and commuter mobility in the I-880 corridor and contribute to a daily recurring bottleneck that accounts for 50% of the northbound delay on I-880 in Alameda county. The frequency of accidents in this area is approximately five times higher than the statewide average, which exacerbates the existing bottleneck conditions.

The proposed project will remove and reconstruct the 29<sup>th</sup> Avenue overcrossing and the two 23<sup>rd</sup> Avenue overcrossings of I-880, which is the major truck route in the Bay Area. Reconstruction of the overcrossings will provide room to widen the existing I-880 mainline lanes to the Caltrans standard width of 12 feet. In addition, the proposed project will widen the mainline outside shoulders and lengthen existing auxiliary lanes. These improvements will increase the flow of vehicles along the mainline and help reduce the rate of congestion related accidents in the area. The improvements are forecasted to provide a 2% reduction in daily VHT (vehicle hours traveled) and an approximate 19% reduction in peak hour travel time as well as accommodate future mainline improvements.

The new overcrossings will also provide standard vertical clearances over mainline I-880. Currently, the minimum vertical clearances at the 23<sup>rd</sup> Avenue (eastbound), 23<sup>rd</sup> Avenue (westbound), and 29<sup>th</sup> Avenue overcrossings are 13 ft – 9 in, 14 ft – 9 in and 15ft – 2 in, respectively. The Caltrans current minimum design standard clearance is 16 ft – 6 in. Caltrans Bridge Inspection Reports and TASAS accident data indicate that vehicles carrying oversized loads have hit these bridges two times between July 2001 and June 2004. These impacts cause mainline delays, personal injuries, property damage and additional bridge maintenance. The reconstruction would provide a vertical clearance of 16.5 feet reducing the potential of oversize trucks hitting the overcrossing, thus improving the reliability of the route for trucking and port movements, which will also improve the reliability for commuter travel and commerce.

##### **Project Background**

Interstate 880 has been identified as being one of the most congested freeway corridors in Alameda County (ACCMA Mobility Monitor, 2006). It is a vital part of the Bay Area's transportation system and is part of a major trucking route (I-880 / I-238 / I-580 / I-205) serving the Bay Area, the Central Valley and the western United States. I-880 provides access to numerous intermodal facilities and attractions including the Port of Oakland, Oakland International Airport, the U.S. Mail and UPS distribution centers, downtown Oakland, and the Oakland/Alameda County Coliseum complex. The I-880 corridor is the primary north-south freight route to and from the Port of Oakland and has the highest volume of trucks in the region (I-880 Corridor System Management Plan). The Bay Area's largest port, the Port of Oakland, is located within the I-880 corridor. The Port generates 25% of the truck traffic on I-880 and approximately 9% of all truck traffic in the Bay Area. A high volume of goods moves to and from the Silicon Valley on the south end of the corridor.

The central I-880 corridor in Alameda County is a densely developed, highly urbanized area, lying at the center of the larger San Francisco Bay Area region. The corridor currently has a population of about 320,000 and about 180,000 jobs (as of 2000). Just over half the total population and employment of the cities of Oakland and San Leandro lie within the corridor. The corridor has relatively high development, employment and population densities. It is also the primary regional roadway facility providing access to residents and businesses along the eastern edge of the bay from Oakland south. I-880 is a major route



## **TRADE CORRIDORS IMPROVEMENT FUND PROJECT NOMINATION**

### **I-880 OPERATIONAL AND SAFETY IMPROVEMENTS AT 29<sup>TH</sup> AND 23<sup>RD</sup> AVENUE OVERCROSSINGS**

for Bay Area goods movement providers and commuters at all times of the day, providing connections between centers in Alameda, Santa Clara, San Francisco, Contra Costa, and San Mateo Counties. It has been identified as the most critical goods movement corridor in the region and, therefore, I-880's viability is essential to regional economic vitality. Improvements on the I-880 corridor that reduce congestion and delays would benefit goods movement and commercial services in the center of the Bay Area.

Average daily traffic volumes exceed 220,000 vehicles/day, with combined northbound and southbound volumes exceeding 14,000 vehicles in both the AM and PM peak hours. In addition, the accident rate for the corridor within the study limits is five times the average rate for a comparable freeway in California.

Congestion occurs on a recurring basis within the corridor, in both directions and during both peak periods. High traffic volumes, as well as nonstandard design features (e.g., short weaving sections) contribute to bottlenecks. Non-recurring events, such as accidents and stalled vehicles, also contribute significantly to the congestion and delay experienced in the corridor.

#### **Purpose**

The purpose of the proposed project is to improve the mobility of mainline freight vehicles and reduce accidents on the I-880 corridor in the vicinity of 29th Avenue and 23rd Avenue.

#### **Need**

The existing I-880 interchanges at 29<sup>th</sup> Avenue and 23<sup>rd</sup> Avenue are closely spaced (nonstandard interchange spacing, 1400 ft) and the mainline freeway horizontal alignment transitions between relatively small-radius reversing horizontal curves. The existing overcrossings have multiple columns supporting each bridge and the vertical clearance over I-880 are less than the Caltrans standard 16.5 feet. These bridge columns are oriented in such a way as to prevent widening of the mainline freeway to accommodate standard lane widths, standard shoulders or to incorporate auxiliary lane extensions. The inside and outside mainline shoulders do not meet current design standards and the width of the number one (inside) lane in the northbound direction is less than the 12-foot design standard. These conditions all contribute to the poor operations of this section of I-880 as well as contribute to the high rate of accidents (approximately five times the state-wide average).

#### **Project Scope and Benefits**

The proposed project scope of work includes:

- Relocating the northbound Lisbon Avenue on ramp to begin at 29<sup>th</sup> Avenue providing a lengthened northbound auxiliary lane and constructing a sound wall between 29<sup>th</sup> Avenue and 23<sup>rd</sup> Avenue;
- Removing and reconstructing the 29<sup>th</sup> Avenue overcrossing;
- Removing and reconstructing both the eastbound and westbound 23<sup>rd</sup> Avenue overcrossings;
- Reconstructing the 23<sup>rd</sup> Avenue / I-880 Northbound ramps / 11<sup>th</sup> Street intersection; and
- Lengthening and improving the northbound off ramp at 29<sup>th</sup> Avenue to terminate directly onto the 29<sup>th</sup> Avenue overcrossing; and

I-880 at 23<sup>rd</sup> Avenue and 29<sup>th</sup> Avenue has been identified by Caltrans as a daily recurring bottleneck in the I-880 Corridor System Management Plan, accounting for 50% of the northbound delay on I-880 in Alameda County. The existing interchange spacing, ramp geometric configurations, and the limited ability to widen the mainline contribute to the recurring bottleneck. Improvements to the 29<sup>th</sup> Avenue northbound off ramp, to the 29th Avenue northbound on ramp and to the auxiliary lane between 29<sup>th</sup> Avenue and 23<sup>rd</sup> Avenue will reduce congestion caused by short weaving distances. The peak hour free flow speed is

## TRADE CORRIDORS IMPROVEMENT FUND PROJECT NOMINATION

### I-880 OPERATIONAL AND SAFETY IMPROVEMENTS AT 29<sup>TH</sup> AND 23<sup>RD</sup> AVENUE OVERCROSSINGS

expected to increase from 30 to 35 mph within the project study area due to the improvements. A 2% reduction in daily VHT and an approximate 19% reduction in peak hour travel time are forecasted with the improvements.

Improvements to the 29<sup>th</sup> Avenue northbound off ramp, to the 29<sup>th</sup> Avenue northbound on ramp and to the auxiliary lane between 29<sup>th</sup> Avenue and 23<sup>rd</sup> Avenue will likely reduce the number of accidents on the northbound mainline lanes. The three-year accident rates in this area are approximately 5 times greater than the statewide average. Reconstructing the 23<sup>rd</sup> Avenue and 29<sup>th</sup> Avenue overcrossings will eliminate the last three nonstandard vertical clearance obstacles in the North I-880 corridor and will provide over 15 continuous miles of standard vertical clearances along the key trucking route from the Port of Oakland to I-238 and I-580. The new overcrossings will reduce the potential of oversize trucks hitting the overcrossing, thus improving the reliability of the route for trucking and port movements, which will also improve the reliability for commuter travel and commerce.

For a comprehensive description of the operational and safety benefits of the proposed project, see the *I-880 North Corridor Operational Improvements Traffic Forecast and Operations Report* and the *I-880 Operational and Safety Improvements at 29<sup>th</sup> Avenue and 23<sup>rd</sup> Avenue Overcrossings Project Study Report*.

#### Air Quality Benefits

The proposed project is anticipated to provide air quality benefits to the local Jingletown community. The improvements are anticipated to reduce congestion along I-880, increase free flow speed, and reduce the amount of vehicles traveling through the community. It is not anticipated that additional truck trips will be generated by the improvements proposed in this project. It is anticipated that this project will not increase regional emissions. Based on a project level analysis, it is estimated that 15 tons of NOx and particulate (PM10) emissions will be reduced due to the proposed improvements over the next 20 years. Additional air quality information for this project is included as an attachment.

## 2. SCREENING CRITERIA

### Eligibility

The I-880 Operational and Safety Improvements at 29<sup>th</sup> Avenue and 23<sup>rd</sup> Avenue is located in the Bay Area Corridor and is included in the Goods Movement Action Plan (GMAP), the Regional Goods Movement Study for the San Francisco Bay Area, and the Regional Transportation Plan (RTP).

Project	GMAP	Cal-MITSAC	Adopted Regional Goods Movement Plan	RTP
I-880 Operational and Safety Improvements at 29 <sup>th</sup> Avenue and 23 <sup>rd</sup> Avenue Overcrossings	✓		✓	✓

### Match

#### Project Cost

The costs identified in this application are based on the information in the Project Study Report. The cost estimate was established using 2007 prices and escalated to the midpoint for construction. The proposed project has been estimated to cost \$95 million. A breakdown of the cost is summarized below and a detailed cost estimate can be found in the *I-880 Operational and Safety Improvements at 29<sup>th</sup> Avenue and 23<sup>rd</sup> Avenue Overcrossings Project Study Report*.

## TRADE CORRIDORS IMPROVEMENT FUND PROJECT NOMINATION

### I-880 OPERATIONAL AND SAFETY IMPROVEMENTS AT 29<sup>TH</sup> AND 23<sup>RD</sup> AVENUE OVERCROSSINGS

Roadway Cost	\$38 million
Structural Cost	\$42 million
Right-of-way	\$ 5 million
Project Development	\$10 million (will be funded by local contribution, as outlined below)

#### Non-TCIF Funding

Funding for the proposed project is summarized below. It should be noted that some funding has already been allocated for the proposed project. Funding amounts noted with an asterix (\*) have already been secured for the proposed project.

Regional Measure 2 (Local funding) - \$8 million\*

SAFETEA (Federal Funding) - \$2 million\*

State Transportation Improvement Program (STIP) - \$5 million\*

State Transportation Improvement Program (STIP) - \$7 million

TCIF/State Highway Operation and Protection Program (SHOPP) - \$ 73 million

Project	Total project cost	TCIF/ SHOPP request	Identified matching funds	State of matching funds*	Match source
I-880 Operational and Safety Improvements at 29 <sup>th</sup> Avenue and 23 <sup>rd</sup> Avenue Overcrossings	\$95 million	\$73 million	\$22 million (\$8m RM2; \$2m SAFETEA; \$12m STIP)	RM2 and SAFETEA funding has been secured; \$5m of STIP is programmed and \$7 m is proposed in 2008 STIP	RM2 (local) SAFETEA (federal)

#### **Project Delivery**

The following outline provides the major phases associated with the proposed project.

Phase I – Northbound I-880 / 29<sup>th</sup> Avenue on ramp, auxiliary lane, and sound wall

Phase II – Removal and Reconstruction of the 29<sup>th</sup> Avenue overcrossing

Phase III – Northbound I-880 / 29<sup>th</sup> Avenue off ramp

Phase IV – Removal and Reconstruction of the 23<sup>rd</sup> Avenue overcrossing and Reconstruction of 23<sup>rd</sup> Avenue Northbound off ramp and on ramp

The proposed project is presented in phases. Each phase (or combination of phases) can be an independent “project” and generally constructed independently from the other phases. Ideally, all phases should be constructed at the same time to maximize the economy of scale and minimize impacts on the community.

## **TRADE CORRIDORS IMPROVEMENT FUND PROJECT NOMINATION**

### **I-880 OPERATIONAL AND SAFETY IMPROVEMENTS AT 29<sup>TH</sup> AND 23<sup>RD</sup> AVENUE OVERCROSSINGS**

The delivery schedule used in this application is based on information from the *I-880 Operational and Safety Improvements at 29<sup>th</sup> Avenue and 23<sup>rd</sup> Avenue Overcrossings Project Study Report*.

The following provides the schedule for completion of the proposed activities.

- Final PSR Approval November 2007
- Environmental Approval April 2010
- Project Report Approval April 2010
- Geometric Approval Drawings September 2010
- Plans, Specification and Estimate December 2011
- Right-of-way Certification April 2012
- Begin Construction August 2012
- End Construction October 2015

#### Risk

The following paragraphs describe potential project risks and the response strategy for each risk.

##### **Environmental**

There is the potential for environmental impacts relative to either the soil and/or groundwater with the project site excavation area. An environmental evaluation of the soil and/or groundwater should be performed prior to construction and recommendations to identify reduce or eliminate impacts will be identified.

##### **Design**

Stage construction will be complex as there are other major projects that are anticipated to be under construction concurrently with this project. In addition, the local circulation in the vicinity of the proposed project does not accommodate convenient detours for false work construction and mainline improvements.

##### **Economic Growth**

Improving daily recurring congestion bottleneck locations are important to regional economic growth as well as for existing businesses and residents. I-880 is the primary route for freight into and out of the Port of Oakland, which generates nearly 44,000 jobs and provides almost 20% of the Bay Area's domestic trade equaling \$81 billion (ACCMA Mobility Monitor, 2006). By removing the existing bottleneck along I-880, the operational and safety conditions of the corridor will improve and are anticipated to stimulate economic growth.

##### **Air Quality**

This project proposes improvements that are anticipated to increase peak hour free flow speed and non-peak hour free flow speed from 30 to 35 mph and 50 to 55 mph, respectively. A preliminary air quality assessment was performed and indicated that the increase in free flow speeds will provide a total daily reduction in NOx and PM10 emissions within the project limits. Based on a project level analysis, it is estimated that 15 tons of emissions will be reduced due to the proposed improvements over the next 20

## **TRADE CORRIDORS IMPROVEMENT FUND PROJECT NOMINATION**

### **I-880 OPERATIONAL AND SAFETY IMPROVEMENTS AT 29<sup>TH</sup> AND 23<sup>RD</sup> AVENUE OVERCROSSINGS**

years. It is anticipated that this project will not increase regional emissions. The results of a local air quality assessment are included as an attachment to this application.

### **3. EVALUATION CRITERIA**

The following sections provide a summary of the operation and safety benefits that the proposed project are anticipated to provide. For additional information, please refer to the *I-880 North Corridor Operational Improvements Traffic Forecast and Operations Report* and the *I-880 Operational and Safety Improvements at 29<sup>th</sup> Avenue and 23<sup>rd</sup> Avenue Overcrossings Project Study Report*.

#### **Freight System Factors**

##### **Throughput**

The improvements to the 23<sup>rd</sup> Avenue and 29<sup>th</sup> Avenue overcrossing will provide 16.5 feet of vertical clearance over the I-880 mainline. This will allow freight trucks traveling along I-880 to achieve the maximum height limit of 14 feet set forth by the California Vehicle Code.

A 2% reduction in daily VHT and an approximate 19% reduction in peak hour travel time are forecasted which will improve the throughput of freight traffic due to operational improvements.

##### **Velocity**

The peak hour free flow speed and the non-peak hour free flow speed are expected to increase from 30 to 35 mph and 50 to 55 mph, respectively, within the project study area due to the improvements. It should be noted that 74% of the total daily VMT happens during peak hours.

##### **Reliability**

Reconstructing the 23<sup>rd</sup> Avenue and 29<sup>th</sup> Avenue overcrossings will eliminate the last nonstandard vertical clearance obstacles in the North I-880 corridor. The reconstruction would provide a vertical clearance of 16.5 feet reducing the potential of oversize trucks hitting the overcrossing, thus improving the reliability of the route for trucking and port movements, as well as the reliability for commuter travel and commerce.

Additionally, the lengthening of the weaving section between the 29<sup>th</sup> Avenue on ramp and the 23<sup>rd</sup> Avenue off ramp will improve the weaving level of service and is anticipated to reduce the frequency of accidents in the area, which contribute to congestion and increased travel time along the corridor.

The improvements to the 29<sup>th</sup> Avenue off ramp will provide a longer storage length by relocating the off ramp terminus to the 29<sup>th</sup> Avenue overcrossing. This will provide additional storage for queuing vehicles exiting the I-880 and help to prevent spill back, which cause congestion and reliability issues.

#### **Transportation System Factors**

##### **Safety**

The removal and reconstruction of the 23<sup>rd</sup> Avenue and 29<sup>th</sup> Avenue overcrossings will provide the Caltrans standard of 16.5 feet over the I-880 mainline. These improvements will minimize the potential for oversized trucks from hitting the overcrossings causing safety concerns for truck and commuter traffic.

The lengthening of the weaving section between the northbound 29<sup>th</sup> Avenue on ramp and the 23<sup>rd</sup> Avenue off ramp is anticipated to reduce the occurrence of accidents. The existing short weaving length contributes to the high accident rates in the area.

## **TRADE CORRIDORS IMPROVEMENT FUND PROJECT NOMINATION**

### **I-880 OPERATIONAL AND SAFETY IMPROVEMENTS AT 29<sup>TH</sup> AND 23<sup>RD</sup> AVENUE OVERCROSSINGS**

The relocation of the northbound 29<sup>th</sup> Avenue off ramp terminus to the 29<sup>th</sup> Avenue overcrossing will provide a longer storage length for queuing vehicles. This will help to prevent off ramp vehicles from spilling back onto the I-880 mainline contributing to congestion and posing safety concerns.

The improvements to 29<sup>th</sup> Avenue off ramp will also provide safety improvements to pedestrians in the Jingtowntown neighborhood. Currently, the 29<sup>th</sup> Avenue off ramp terminates at a three-way stop sign at the intersection with East 9<sup>th</sup> Street. This intersection is adjacent to the entrance of the Lazear Elementary School. The relocation of the off ramp would provide safer access to the elementary school for children.

The improvements to the 29<sup>th</sup> Avenue on ramp would also provide safety benefits to the Jingtowntown neighborhood. The existing on ramp is located immediately adjacent to the neighborhood and 29<sup>th</sup> Avenue vehicles destined for I-880 travel through the neighborhood along residential roads. The relocation of the on ramp will provide an improved access route from 29<sup>th</sup> Avenue to I-880 and eliminate the circulation of vehicles through the neighborhood.

#### **Congestion Reduction/Mitigation**

The relocation of the 29<sup>th</sup> Avenue on ramp and the lengthening of the weaving section between the 29<sup>th</sup> Avenue on ramp and the 23<sup>rd</sup> Avenue off ramp will improve the weaving level of service and is anticipated to reduce the frequency of accidents in the area. Both of these contribute to congestion and increased travel time along the corridor. In addition, the density of the weaving section is forecast to decrease by 9% during the AM peak hours and 8% during the PM peak hours.

Currently, the 23<sup>rd</sup> Avenue on ramp consists of two on ramps that accommodate 23<sup>rd</sup> Avenue in the eastbound and westbound directions. The proposed improvements will remove the eastbound on ramp and reconfigure the existing westbound on ramp to accommodate both directions of 23<sup>rd</sup> Avenue. This configuration is forecast to reduce the density of the 23<sup>rd</sup> Avenue on ramp merge section along I-880 by 6% during the AM peak hour. This decrease in density will provide operational benefits and are anticipated to reduce congestion along the mainline.

The improvements to the 29<sup>th</sup> Avenue off ramp are forecast to reduce the density of the I-880 diverge section by 5% during the AM peak hours and 8% during the PM peak hours. The decrease in density will provide operational benefits and are anticipated to reduce congestion along the mainline.

#### **Key Transportation Bottleneck Relief**

I-880 at 29<sup>th</sup> Avenue and at 23<sup>rd</sup> Avenue has been identified by Caltrans as a primary recurring bottleneck in the I-880 Corridor System Management Plan. Improvements to the 29<sup>th</sup> Avenue northbound off ramp, to the 29<sup>th</sup> Avenue northbound on ramp and to the auxiliary lane between 29<sup>th</sup> Avenue and 23<sup>rd</sup> Avenue will reduce congestion caused by short weaving distances and inadequate ramp lengths, and will therefore improve freight and commuter mobility.

#### **Community Impact Factors**

The proposed project improvements, specifically at the 29<sup>th</sup> Avenue off ramp and on ramp, will significantly reduce negative impact to the local community.

As stated earlier, the improvements to 29<sup>th</sup> Avenue off ramp will provide an important deceleration distance as well as safety improvements to pedestrians in the Jingtowntown neighborhood. The 29<sup>th</sup> Avenue off ramp currently terminates at a three-way stop sign at the intersection with East 9<sup>th</sup> Street and adjacent to the entrance of the Lazear Elementary School. The relocation of the off ramp would provide pedestrians and bicyclist safer access to the elementary school.

## **TRADE CORRIDORS IMPROVEMENT FUND PROJECT NOMINATION**

### **I-880 OPERATIONAL AND SAFETY IMPROVEMENTS**

#### **AT 29<sup>TH</sup> AND 23<sup>RD</sup> AVENUE OVERCROSSINGS**

Also, the relocation of the 29<sup>th</sup> Avenue on ramp would provide safety benefits to the Jingtowntown neighborhood. As previously stated, the existing on ramp is located immediately adjacent to the neighborhood. The relocation of the on ramp will provide an improved access route from 29<sup>th</sup> Avenue to I-880 with a longer ramp while eliminating the traffic cutting through the neighborhood. This will decrease the amount of traffic on the local roads and improve the safety for pedestrians and bicyclists.

The project proposes to construct a continuous sound wall along the 29<sup>th</sup> Avenue on ramp between the I-880 mainline and the Jingtowntown neighborhood. The sound wall is being proposed to mitigate noise levels from vehicles traveling along the interstate and the on ramp.

#### **4. ATTACHMENTS**

Project Location Map

Proposed Project Map

Project Programming Request Form

Preliminary Air Quality Assessment

CD containing the following documents

- I-880 Operational and Safety Improvements at 29<sup>th</sup> Avenue and 23<sup>rd</sup> Avenue Overcrossings Project Study Report
- I-880 North Corridor Operational Improvements Traffic Forecast and Operations Report
- I-880 Preliminary Environmental Analysis



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*Members:*

Benicia  
Dixon  
Fairfield  
Rio Vista  
Solano County  
Suisun City  
Vacaville  
Vallejo

January 14, 2008

Mr. James Ghielmetti, Chairman  
**California Transportation Commission (CTC)**  
1120 N Street  
Room 2221 (MS-52)  
Sacramento, CA 95814

**RE: Solano Transportation Authority's (STA)  
Trade Corridor Improvement Funds (TCIF) I-80 Eastbound Cordelia Truck  
Scales Relocation Project Submittal**

Dear Mr. Ghielmetti:

The Solano Transportation Authority (STA) is pleased to submit a project application for the Relocation of the Cordelia Truck Scales on I-80 for the Proposition 1B Trade Corridors Improvement Fund (TCIF).

The I-80 Cordelia Truck Scales significantly contribute to the congestion on I-80 due to the large number of trucks exiting and entering I-80 and the close proximity of the scales to several interchanges. In addition, the Cordelia Truck Scales, which were constructed in 1958, are seriously undersized and unable to process the existing truck volumes let alone the future projected truck volumes. The project would construct new eastbound truck scales with the capacity to accommodate the anticipated 115% growth in truck traffic in the corridor by 2040; to provide traffic congestion relief in this section of I-80 due by reducing truck /auto weaving and queuing; and to improve the reliability of the system with increased capacity and up-to-date equipment.

The top priority for Solano County is the reduction of congestion on I-80 as well as improving trade mobility throughout the corridor. The attached Solano County I-80 Eastbound Cordelia Truck Scales Relocation Project is seeking \$49.6 million from the TCIF to construct this important project. The project will increase throughput by increasing the truck processing rate from the current 400 trucks per hour to 1,000 trucks per hour. The project has a number benefits including; increased velocity and reliability of freight traffic, improve safety in the corridor, reduce traffic congestion, improve air quality in the region as well as the access to markets will be improved and commerce will be more efficiently conducted.



The I-80 Corridor is a vital thread in the economic web of California. In addition to being an important regional commuter route, it provides a key route for the distribution of goods from the Pacific Rim to the northern part of the state and the western U.S beyond. There is a commitment in the region to maximize and sustain any mobility gains in the corridor, but technology alone cannot provide the improved safety and operations that will allow the corridor to continue to function efficiently in its role. Relocating the Truck Scales in this corridor is a critical step in improving the overall mobility in this economically significant region. The new scales facility—and its respective redesigned ramps—will provide an overall benefit to goods movement and safety within the corridor.

The STA is submitting this application in partnership with Caltrans and MTC. Should you have any questions, please feel free to call myself or Janet Adams, STA's Director of Projects, at (707) 424-6075.

Sincerely,



Daryl K. Halls  
Executive Director

Enclosure:

A. I-80 Eastbound Cordelia Truck Scales Relocation Project Application

Cc: STA Board Members  
The Honorable George Miller, 7<sup>th</sup> Congressional District  
The Honorable Ellen Tauscher, 10<sup>th</sup> Congressional District  
The Honorable Pat Wiggins, Senate District 2  
The Honorable Mike Mechado, Senate District 5  
The Honorable Noreen Evans, Assembly District 7  
The Honorable Lois Wolk, Assembly District 8  
Dale Bonner, Secretary, BT&H  
Will Kempton, Director, Caltrans  
Bijan Sartipi, District Director, Caltrans District 4  
Bill Dodd, MTC Chair, Napa County Board of Supervisors  
Mike Ferrell, Lieutenant, California Highway Patrol



# 2008 Project Programming Request

## (Project Information)

General Instructions

<input checked="" type="checkbox"/> New Project		<input type="checkbox"/> Amendment (Existing Project)		<b>Date:</b> 01/14/08	
<b>Caltrans District</b>	<b>EA</b>	<b>PPNO</b>	<b>MPO ID</b>	<b>TCRP No.</b>	
04	0A530	367D			
<b>County</b>	<b>Route/Corridor</b>	<b>Project Sponsor/Lead Agency</b>		<b>MPO</b>	<b>Element</b>
SOL	80	STA/Caltrans		MTC	
<b>Project Title</b>					
Eastbound Cordelia Truck Scale Relocation Project					
<b>PM Bk</b>	<b>PM Ahd</b>	<b>Project Mgr/Contact</b>	<b>Phone</b>	<b>E-mail Address</b>	
14.3	14.4	Nic Endrawos/Janet Adams	286-5123/(707)424	las_endrawos@dot.ca.gov/jadams@sta-snci.ca.gov	
<b>Location, Project Limits, Description, Scope of Work, Legislative Description</b>					
The project would rebuild and relocate the Eastbound Truck Scales Facility, build a 4-lane bridge across Suisun Creek, and construct braided ramps from the new truck scales facility to EB I-80 and EB SR 12 ramps. The facility will be designed to handle 2040 truck traffic volumes and will have a useful life of at least 25 years.					
<b>Component</b>	<b>Implementing Agency</b>		<b>AB 3090</b>	<b>Letter of No Prejudice</b>	
<b>PA&amp;ED</b>	STA		<input type="checkbox"/>	<input type="checkbox"/>	
<b>PS&amp;E</b>	STA		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Right of Way</b>	Caltrans		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Construction</b>	Caltrans		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Legislative Districts</b>					
<b>Assembly:</b> 8		<b>Senate:</b> 5			
<b>Congressional:</b> 10					
<b>Purpose and Need</b>					
The Cordelia Truck Scales significantly contribute to the congestion on I-80 due to the large number of trucks exiting and entering I-80 and the close proximity of the scales to both the Suisun Valley Road and I-680 interchanges. In addition, the Cordelia Truck Scales were constructed in 1958 and are seriously undersized and overcapacitated. The purpose of the project is to construct new truck scales with the capacity to accommodate the anticipated 115% growth in truck traffic in the corridor by 2040; to provide traffic congestion relief in this section of I-80 by reducing truck/auto weaving and truck queuing; and improve reliability of the system with improved capacity and up-to-date equipment.					
<b>Project Benefits</b>					
The Project will increase truck throughput from the current 400 trucks per hour to 1,000 trucks per hour. The Project will increase velocity of freight traffic by processing trucks at the scales more quickly and efficiently; by providing better diverge and merge operations at the scales off/on-ramps, and help relieve congestion in the vicinity of the scales on/off-ramps by providing better spacing. The planned new scales will improve reliability for the Truck Scales by processing trucks with more redundancy and fewer unplanned closures of the facility and improve the reliability of the regional highway corridor by reducing congestion.					
<b>Project Milestone</b>					<b>Date</b>
Project Study Report Approved					06/01/02
Begin Environmental (PA&ED) Phase					05/01/03
Circulate Draft Environmental Document			<b>Document Type</b> EIR/EIS	01/31/09	
Draft Project Report					01/31/09
End Environmental Phase (PA&ED Milestone)					12/31/09
Begin Design (PS&E) Phase					01/01/10
End Design Phase (Ready to List for Advertisement Milestone)					05/01/12
Begin Right of Way Phase					01/01/10
End Right of Way Phase (Right of Way Certification Milestone)					05/01/12
Begin Construction Phase (Contract Award Milestone)					10/01/12
End Construction Phase (Construction Contract Acceptance Milestone)					12/31/14
Begin Closeout Phase					01/01/15
End Closeout Phase (Closeout Report)					12/31/15



# 2008 Project Programming Request (Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
SOL	04	367D	0	0A530
<b>Project Title:</b> Eastbound Cordelia Truck Scale Relocation Project				

Existing Total Project Cost									Implementing Agency
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Total Project Cost									
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	22,200	0	0	0	0	22,200	
R/W SUP (CT)	0	0	0	400	0	0	0	400	
CON SUP (CT)	0	0	0	0	9,700	0	0	9,700	
R/W	0	0	0	2,600	0	0	0	2,600	
CON	0	0	0	0	64,700	0	0	64,700	
TOTAL	0	0	22,200	3,000	74,400	0	0	99,600	

Fund No. 1:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	Funding Source is TCIF/SHOPP
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON					49,800			49,800	
TOTAL	0	0	0	0	49,800	0	0	49,800	

Fund No. 2:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	Funding Source is AB1171 - PS&E Budget includes 10% Project Reserve
PS&E			22,200					22,200	
R/W SUP (CT)				400				400	
CON SUP (CT)					9,700			9,700	
R/W				2,600				2,600	
CON					14,900			14,900	
TOTAL	0	0	22,200	3,000	24,600	0	0	49,800	



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## **I-80 Eastbound Cordelia Truck Scales Relocation Project (\$99.6 million)**

### ***Ensuring I-80 Trade Corridor Goods Movement Reliability***

#### **Project Description**

The project would rebuild and relocate the Eastbound Cordelia Truck Scales Facility, build a 4-lane bridge across Suisun Creek, and construct braided ramps from the new truck scales facility to EB I-80 and EB SR 12 ramps. The facility will be designed to handle 2040 truck traffic volumes and will have a useful life of at least 25 years.

#### **Project Background**

The I-80/I-680/SR12 junction and the Truck Scales in Cordelia create major congestion on I-80 in Fairfield during both the AM and PM peak periods. The AM peak hour current congestion extends from the I-80/I-680/SR12 junction to West Texas Street, a distance of nearly 4.5 miles. Heavy westbound on-ramp volumes from the SR 12 East and Air Base Parkway interchanges also contribute to the congestion during the AM peak period. During the PM peak periods, heavy eastbound I-80 traffic volumes, in conjunction with on-ramp volumes from the SR 12 West and I-680 combine with the truck queues to create congestion on eastbound I-80 within the I-80/I-680/SR 12 Interchange.

Significant truck weaving traffic creates queues on I-80 in both directions in the vicinity of the truck scales. The total daily travel demand entering the I-80/I-680/SR 12 Interchange is projected to grow from approximately 145,000 vehicles to 270,000 vehicles by 2035, an increase of 80%. Truck volumes, which constitute 5% of the current total daily traffic volume, are projected to grow from the current 11,800 trucks per day to 25,300 trucks per day by 2040, a **115 % increase**. Currently, the high volume of trucks exiting and re-entering I-80 at the truck scales facility results in truck queues in the outside mainline lane during the PM peak period.

#### **Purpose & Need**

The Cordelia Truck Scales significantly contribute to the congestion on I-80 due to the large number of trucks exiting and entering I-80 and the close proximity of the scales to several interchanges, including SR12 East, Suisun Valley Road, I-680, Green Valley Road and SR12 West. In addition, the Cordelia Truck Scales, which were constructed in 1958, are seriously undersized and unable to process the existing truck volumes let alone the future projected truck volumes. The purpose of the project is to construct new eastbound truck scales with the capacity to accommodate the anticipated 115% growth in truck traffic in the corridor by 2040; to provide traffic congestion relief in this section of I-80 due by reducing truck /auto weaving and queuing; and to improve the reliability of the system with increased capacity and up-to-date equipment.

#### **Project Scope and Anticipated Benefits**

The Eastbound Truck Scales Relocation project is a component of the STA's highest priority project, the I-80/I-680/SR 12 Interchange Complex, which was identified in the I-80/I-680/I-780 Corridor Major Investment Study (MIS) (July 2004). The MIS found that the scales' effect on traffic congestion and safety on I-80, within the I-80/I-680/SR 12 Interchange, is so significant that relocation of the scales outside the I-80/I-680/SR 12 interchange complex should be considered. Based on this finding, the STA prepared the Cordelia Truck Scales Relocation Study (February 2005), which examined options for reconstructing and expanding the scales near their present location, as well as options outside the I-80/I-680/SR 12 Interchange area. Due to enforcement, as well as capital and operating expenses, reconstruction and expansion of the scales in the vicinity of the existing Cordelia scale facility on I-80 between Suisun Valley Road and SR 12 East (within the I-80/I-680/SR12 Interchange Complex) was

determined to be the preferred option by the CHP, Caltrans, and the STA. The project will relocate and rebuild the Eastbound Truck Scales Facility, build a 4-lane bridge across Suisun Creek, and construct braided ramps from the new truck scales facility to EB I-80 and EB SR 12 ramps.

As mentioned above, the Eastbound Truck Scales Relocation Project is a critical component of the I-80/I-680/SR 12 Interchange complex. In order to implement this project expeditiously, it is being designed and constructed as a separate project in parallel with implementation of other components of the I-80/I-680/SR 12 Interchange Complex.

The Eastbound Cordelia Truck Scales Relocation Project is a critical project for the I-80 Corridor because it will:

- **Improve velocity.** The new scales will be able to process up to 1,000 trucks per hour.
- **Improve throughput.** With increased velocity of truck processing, overall freight throughput will increase.
- **Improve reliability.** The new scales will improve reliability for the Truck Scales by processing trucks with more redundancy and fewer unplanned closures of the facility. The project will also improve the overall system reliability by reducing congestion and improving safety in a notoriously unreliable section of the I-80 regional highway corridor.
- **Improve congestion.** Currently, extreme congestion in the I-80 Corridor—significantly exacerbated by the truck traffic—leads to regional trips diverting to local roadways within the project area; conversely, congestion limits vehicles making trips with local origins or destinations from accessing the system. The Truck Scales Relocation Project will reduce projected future congestion on I-80, making the regional freeway system more accessible for both regional through-trips, and regional trips with local origins or destinations.

#### **The I-80 Travel Corridor and the Function of the Cordelia Truck Scales**

I-80 is a major transcontinental highway route—typically six to eight lanes—extending well beyond Solano County, connecting the metropolitan areas of San Francisco and Sacramento. There are no other major parallel routes to I-80 in this region. The corridor within Solano County functions as a primary truck route and an essential regional commuter route, connecting the Port of Oakland to points east and north and contributing significantly to the economic health of the State of California by facilitating goods distribution throughout the western U.S. The Inspection Facility is set at a strategic location that allows the CHP to screen trucks coming into and out of the Bay Area and Sacramento Valley. This includes traffic from I-80, I-680 and SR 12 westbound toward Napa; and SR 12 toward Rio Vista. There are very few routes available for commercial drivers to avoid the Cordelia Truck Scales and those routes are regularly patrolled for violators.

It should also be noted that for eastbound traffic out of the Bay Area, this is the only inspection facility on I-80<sup>1</sup>. The presence of the Cordelia Truck Scales not only provides an emphasis on proper maintenance and driver compliance the region needs because of the significant amount of commercial vehicle traffic, but decreases incident related congestion due to commercial vehicle related accidents wherever the vehicle goes! If there is no emphasis through enforcement, compliance will be reduced and accidents will increase.

Truck Scale facilities serve multiple purposes including homeland security, ensuring safety to the motoring public and protecting the transportation infrastructure. As an integral part of the overall homeland security strategy, the Cordelia Truck Scales serve as the location for screening international and domestic shipments moving in and out of the Port of Oakland, as well as trucks moving commodities within the Bay Area, Sacramento Valley and across the western United States. There is an explosives

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<sup>1</sup> Antelope Platform Scale, located in Sacramento, is a smaller facility with one scale, no inspection bays and limited operating hours.

detection canine assigned to Cordelia that is trained to specifically screen commercial vehicles for explosive components and radiological scanning equipment. The inspectors at the Truck Scales facility are generally the first to make contact with the drivers. They are trained to watch out for suspicious activity and report it to the uniformed officers on duty. They act as a deterrent.

Another important aspect of the inspection facility is to help ensure the safety of the motoring public. The primary focus here is preventing accidents due to drivers and equipment failure. Each driver of a vehicle that is inspected is evaluated to ensure they have the proper license and medical certifications and are in a safe condition to drive, i.e., not fatigued, under the influence of drugs or alcohol. The critical components, size and load of their vehicle are also inspected to ensure it is safe to move down the road. Items such as brakes, suspension, steering and load securement are examined using established criteria. If either the driver or the vehicle does not pass this inspection, they are placed out of service and cannot leave the facility until the discrepancy is corrected.

Protecting the State's roadways is another important aspect of the inspection facility. Damage to roadways due to overweight vehicles is a significant and expensive problem for Caltrans. Caltrans has found that roadways where inspection facilities are located sustain less damage due to overweight vehicles, thereby saving transportation dollars and protecting the infrastructure.

The significance of the I-80 Corridor through Solano County to the region—and to the entire state of California—cannot be overstated and as such, the Solano County Transportation Authority is committed to preserving mobility gains that arise from the completion of capital projects within the I-80 Corridor. A comprehensive corridor analysis effort is currently underway, covering the entirety of I-80 within Solano County, and is being performed in cooperation with the STA, MTC and Caltrans District 4. This effort conforms to the Corridor System Management Plan guidelines prescribed by the CTC, and will produce a prioritized list of projects and operational strategies from which the I-80 corridor in Solano County will be efficiently managed into the future. The strategies being analyzed include optimal use of the HOV lanes that will be under construction by early summer 2008, implementation of ramp metering to preserve mobility even as travel demands grow, and installation of traffic monitoring infrastructure to allow for rapid clearance of incidents and to provide data from which corridor management strategies can be based.

## **Screening Criteria**

### **1. Eligibility**

- a. The project is included in the GMAP, the adopted Regional Goods Movement Plan, and the RTP.

<b>Project</b>	<b>GMAP</b>	<b>Cal-MITSAC</b>	<b>Adopted Regional Goods Movement Plan</b>	<b>RTP</b>
I-80 Eastbound Cordelia Truck Scales Relocation Project	<b>X</b>		<b>X</b>	<b>X</b>

- b. The expected cost of the project, including right-of-way and support, is \$99.6 million in 2012 dollars. Funding for the project is planned from two separate funding sources, TCIF/ State Highway Operation and Protection Program (SHOPP) and AB1171. The amount of the request from the TCIF/SHOPP Program is \$49.6 million. Matching funds include \$49.6 million in AB1171 funds administered by the Metropolitan Transportation Commission (MTC). MTC has committed the AB1171 and both MTC and Caltrans support this funding plan.

<b>Project</b>	<b>Total project cost</b>	<b>TCIF /SHOPP request</b>	<b>Identified matching funds</b>	<b>State of matching funds*</b>	<b>Match source</b>
I-80 Eastbound Cordelia Truck Scales Relocation Project	<b>\$99.6 million</b>	\$49.6 million	\$49.6 million	Committed	AB1171

## 2. Deliverability

The fundamental element of the project delivery plan for the Eastbound Cordelia Truck Scales Relocation Project is the partnership between STA and Caltrans. The STA and Caltrans have been working on the planning and implementation of the Eastbound Cordelia Truck Scales Relocation since 2002. A comprehensive planning study, the Cordelia Truck Scales Relocation Study (STUDY) was completed in February 2005 and involved all stakeholders including Caltrans, STA, CHP, and each affected city in Solano County.

Subsequent to the completion of the STUDY, STA and Caltrans have been proceeding with the preparation of the CEQA/NEPA clearance for the project. The Draft EIR/EIS for the project is planned to be circulated in late 2008. There is great public recognition of the impacts—both operational and safety-related—of the existing scales on the region and as such, there is great support for completing the project as soon as possible. The STA has had numerous public meetings that included the Eastbound Truck Scales Relocation Project. There is no known opposition.

STA and Caltrans, in partnership, have developed a delivery plan to expedite the other phases of project delivery. STA will take the lead on preparing PS&E and Caltrans will perform R/W Acquisition, as well as advertisement, award and administration of the construction contract.

With respect to risks associated with the Eastbound Cordelia Truck Scales Relocation Project, the STA/Caltrans team has not identified any unusual or significant risks associated with the project. The planned area for the relocation of the Eastbound Truck Scales is in an undeveloped/rural area adjacent to I-80 and approximately ½ mile further east of the current location. Sufficient environmental studies have been completed to determine that there are no environmental fatal flaws, i.e., endangered species, etc. Also, as stated above, based on public meetings over the past few years, the project has great support and no known opposition exists. Right-of-way acquisition will be required in order to implement the project. However, based on preliminary engineering layouts, only approximately 5 partial takes will be required and it appears that no relocations/demolitions will be required.

As such, the only major risk identified at this point is related to cost. Since the project is currently in the Project Approval /Environmental Document Phase, and since the type of equipment included in or associated with the Truck Scales can vary and are not yet well-defined, the project estimate includes a 10% project reserve. In addition, a 5% escalation factor has been included in the cost estimate to address this item.

The project will begin construction in October 2012. Below is a summary of key project milestones.

<b>MILESTONE</b>	<b>DATE</b>
PA/ED	December 2009
Begin PS&E	January 2010
R/W Certification	May 2012
Ready to List	May 2012
Begin Construction	October 2012
End Construction	December 2014

### 3. Economic/Jobs Growth

The I-80 Corridor's significant function as a regional commuter corridor, as a connector between the urban centers of the Bay Area and Sacramento, and as a major truck route between the Port of Oakland and distribution centers throughout the western U.S., cannot be overstated. This section of I-80 is pivotal in providing access to jobs, housing, markets and commerce in California. By improving travel time and congestion, improving safety and reliability, and reducing the annual hours of delay in the corridor, the project will provide a better connection between jobs and housing. By improving local connectivity—and thereby reinforcing appropriate use of the local road network for local trips—access to markets will be improved and commerce will be more efficient.

### 4. Air Quality

1. **Does the project provide a regional air quality benefit?** The project is expected to result in a *net reduction in air pollution compared to no-project conditions*. This conclusion is based on a comparison of future conditions with the new truck scales to future conditions with the existing scales (future no project condition). The project would generate a temporary increase in short-term emissions from construction of the new truck scales and demolition of the existing scales. However, this temporary increase in emissions would be out-weighted by the decrease in long-term emissions associated with the new scales. The project would generate a *long-term emissions benefit*. Table 1 below compares existing and future truck volumes for the relevant segment of I-80. Total daily traffic volumes will increase 85% by 2035, while peak hour truck volumes will double and average daily truck volumes will increase by 115%.

Table 1. Existing and Future Truck Scale Volumes Compared to Total Traffic Volumes

	Existing	2035
Trucks per day	11,800	25,300
Trucks peak hour	1,076	2,062
Total traffic volume	145,000	270,000

Even though truck volumes will more than double between now and 2035, total emissions will decrease due to improvements in emissions control technology and the turnover in the truck fleet. Table 2 compares existing truck scale emissions to emissions that would occur at the existing truck scale in 2035 and at the new truck scale in 2035. These emission estimates are based on the assumptions described below. ARB's EMFAC2007 model was used to generate emission estimates for 2008 and 2035 for Solano County. Each truck was assumed to travel 0.25 miles within the truck scale area. All trucks were assumed to be heavy heavy-duty diesel trucks. For the existing truck scale and new truck scale 2035 scenarios, half of the trucks were assumed to travel through the scales at 3 miles per hour (full trucks) and half at 5 miles per hour (empty trucks). For the existing truck scale 2035 scenario, an additional idling emission increment was added to the total. The idling increment assumed that 960 trucks would idle for an additional 15 minutes. The 960 trucks used for the idling increment calculation represents the amount above 1000 trucks per hour that the existing truck scales can handle.

The emission estimates shown in Table 2 are only those associated with trucks operating within the truck scale area and are limited to exhaust emissions. The new truck scale would also reduce emissions on the I-80 mainline because it would reduce traffic congestion. This reduced congestion would reduce both truck idling and idling of all motor vehicles traveling on I-80. Consequently, the emission benefits from the new truck scales would likely be larger than those shown in Table 2.



Table 2. Existing and Future Truck Scale Related Emissions (pounds per day)

	ROG	NOx	CO	PM10
Existing Truck Scale	85.9	257.7	195.2	20.0
New Truck Scale 2035	31.0	97.5	86.7	2.0
Existing Truck Scale 2035	34.7	152.3	108.3	2.1

- 2. Does the project increase the expected future level of polluting activity in specific neighborhoods or communities?** The new truck scales will be located in an area east of the existing scales. For the existing scales located on the westbound portion of I-80, the closest residence is located approximately 450 feet north northwest. For the existing scales located on the eastbound portion of I-80, the closest residence is located approximately 2000 feet southwest. For the new scales located on the westbound portion of I-80, the closest residence is located approximately 560 feet north. For the new scales located on the eastbound portion of I-80, the closest residence is approximately 930 feet south southwest.

The California Air Resources Board (ARB) has published "Air Quality and Land Use Handbook: A Community Health Perspective (April, 2005). In that document, ARB includes recommendations for siting new sensitive land uses (residences, day care centers, playgrounds, and medical facilities). ARB recommends not locating new sensitive receptors within 500 feet of a freeway. As discussed in the previous paragraph, the proposed new truck scales would be located so that no sensitive receptors are within 500 feet. ARB's document states that in traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70% drop in particulate pollution levels at 500 feet.

Based on ARB's studies, the new truck scales will be located more than 500 feet from sensitive receptors whereas the existing truck scales are less than 500 feet from one sensitive receptor. Consequently, it appears that the new truck scales will have an air quality benefit. In addition, as shown in Table 2 above, by 2035 emissions of all pollutants will decrease substantially even though truck volumes will more than double. Consequently, the truck scales project is not expected to have negative effects on neighborhoods or communities.

- 3. Does project design avoid or mitigate any emission increases resulting from the increased activity?** As discussed in Item 2 above, the new truck scales would be located more than 500 feet from the nearest sensitive receptor, while the existing scales have one sensitive receptor location within 500 feet. Since the project is designed to reduce traffic congestion on I-80, it will also have a corresponding air quality benefit. Consequently, no additional mitigation is needed to mitigate emissions.
- 4. Does a screening assessment show localized impacts?** A screening analysis was not conducted because the distance between the new truck scales and sensitive receptors exceeds the minimum distances recommended by ARB.
- 5. Are there mitigation opportunities in the impacted area?** Mitigation is not required for this project because the new truck scales are designed to reduce congestion on I-80 caused by truck queues that back up onto I-80. Also, the increased length of truck ingress and egress for the new scales will allow for easier exiting to and entering from the scales. This will reduce congestion on the mainline of I-80, which will reduce air emissions associated with idling vehicles.

## Evaluation Criteria

### 1. Freight System Factors

- **Throughput:** The anticipated growth in truck and general vehicle traffic will severely worsen the current congestion and safety conditions if the scales are not expanded to accommodate the higher truck volumes and moved to a location that provides for maximum weaving lengths and for braiding critical traffic streams. The project will **increase throughput** by increasing the truck processing rate from the current 400 trucks per hour to 1,000 trucks per hour.
- **Velocity:** The project will **increase velocity** of freight traffic by (1) processing trucks at the scales more quickly and efficiently (1,000 trucks per hour as compared to the current processing rate of 400 trucks per hour); (2) providing better diverge and merge operations at the scales' off and on-ramps through the provision of longer ramps that allow for higher merge and diverge speeds (approximately 2600' for the on-ramps and off-ramps, as compared to the existing off-ramp of approximately 500' and the existing on-ramp of approximately 300'), and (3) helping resolve congestion in the vicinity of the scales on- and off-ramps by providing better spacing between the ramp merge and diverge points and upstream/downstream local and freeway-to-freeway connector ramps.
- **Reliability:** The project will **increase reliability** by reducing travel time variability and unpredictability, in two primary ways: (1) the Project's on and off ramps will be longer and will provide better spacing with adjacent ramps, thus reducing congestion near the merge and diverge points on I-80; and (2) the higher processing rate provided by the new scales will eliminate the congestion that results from trucks slowing in the outside lanes as they approach the scales, which often have long queues extending most of the length of the off-ramp. When the queues extend onto the mainline, the truck scales are temporarily closed for safety reasons; with the larger facility and new ramps in place, the scales will no longer be regularly closed, thus improving the reliability and predictability of the system.

### 2. Transportation System Factors

- **Safety:** The project will **improve safety** in the corridor. Accident rates within the corridor near the truck scales are substantially higher than the statewide average for similar facilities. According to data provided by Caltrans for the period between January 2004 and December 2006 (a 36-month period), the accident rate on I-80 adjacent to the truck scales exceeded the statewide average for similar facilities, at 1.10 accidents per million vehicle miles (as compared to the statewide average of 1.04 accidents per million vehicle miles). Just west of the truck scales, between the I-80/I-680 connector structure and the Suisun Valley Road overcrossing, the accident rate was 1.81 accidents per million vehicle miles, as compared to the statewide average for similar facilities of 1.10. This accident rate is 65 percent higher than the statewide average, and reflects the presence of merging and diverging trucks in a heavily congested mainline section with closely spaced interchanges. The number of accidents is expected to grow as general vehicular and truck volumes grow and the weaving, merge and diverge movements near the truck scales ramps become further constrained. Relocating the scales and their respective ramps will improve operations in the corridor and likely slow the growth of the number of collisions associated with congestion, providing an improvement in overall safety in the corridor.

As discussed previously, the safety of all vehicles traveling in the corridor is generally enhanced when the Cordelia Truck Scales are open for operation because this is the venue for truck operational safety inspections. With the existing scales so often closed during peak periods, the opportunity to remove unsafe vehicles or operators from the road is lost. In 2007, 44,025 inspections were conducted at the Cordelia Truck Scales. A total of 6% of vehicles/drivers were taken out of service as a result, and 21% of those resulted in some enforcement action. The new scales will have sufficient capacity that the facility will be operational even during peak periods, ensuring that safety inspections will regularly occur and improving safety for all travelers in the corridor.

- **Congestion Reduction/Mitigation:** The project will **improve traffic congestion** by allowing weaves to occur over a longer distance, and lengthening the off-ramps and on-ramps so that queues can be accommodated away from the mainline freeway traffic. This will ensure merge-diverge operations do not interfere with right-hand lane traffic flows and will improve travel speeds in the corridor. Thus, the Project will reduce traffic delays on eastbound I-80 for all vehicles, and will improve access to the scales for trucks.
- **Key Transportation Bottleneck Relief:** As described above under Evaluation Criteria 1 – Throughput, and Evaluation Criteria 2 – Congestion Reduction, the Cordelia Truck Scales Relocation and Reconstruction Project will relieve a significant freight bottleneck, by (1) providing a facility sized to process up to 1,000 trucks per hour, where the current facility can process only 400 trucks per hour (the current/Year 2040 projected truck demand is 550/1000 trucks per hour, respectively); and (2) providing longer ramps and better ramp spacing to reduce congestion near the ramp merge and diverge points. The Project will also provide the maximum use of the PrePass® technology and weigh-in-motion (WIM) technologies to minimize truck travel times and delay, which in turn will reduce Vehicle Hours of Delay (VHD) for all vehicles through improved efficiency of the I-80 mainline in the project vicinity.
- **Interregional Benefits:** The I-80 Corridor's significant function as a regional commuter corridor, as a connector between the urban centers of the Bay Area and Sacramento, and as a major truck route between the Port of Oakland and distribution centers throughout the western U.S., cannot be overstated. By improving travel time and congestion, improving safety and reliability, and reducing the annual hours of delay in this critical portion of the I-80 Corridor, the project will provide improved connectivity for the entire Bay Area.

### 3. Community Impact Factors

**Air Quality Impact:** The proposed project would have both a regional and a local benefit on air quality. This would occur because the new scales would reduce vehicle congestion and idling both on the mainline of I-80 and at the truck scales. Because of PM 10 and PM 2.5 particulates associated with diesel fuel emissions, an improvement in the capacity and efficiency of the truck scales' operations would reduce emissions by increasing travel speeds of trucks on the scales access ramps, minimizing truck idling times, and increasing general vehicle travel speeds on the adjacent I-80 mainline lanes. Higher travel speeds generate fewer pollutants, thus, the proposed new truck scales would reduce regional emissions of criteria pollutants.

The project would also improve local air quality. ARB recommends that sensitive receptors be located at a minimum of 500 feet from highways. The existing truck scales have one sensitive receptor that is less than 500 feet from its boundaries. The new truck scales are located in an area where all sensitive receptors are located more than 500 feet from the truck scale boundaries. This represents a local air quality benefit. In addition, even though the new truck scales will be able to handle twice as many trucks as the existing scales, future truck-related emissions will be substantially lower because cleaner, lower emitting trucks will gradually replace the existing fleet mix that includes dirtier, higher emitting vehicles. Consequently, even with higher truck volumes, the new truck scales would have lower total emissions of criteria pollutants (including diesel particulates) *and* the closest sensitive receptor would be further away as compared to the existing truck scales. The project will improve air quality in the region.

- **Community Impact Mitigation:** The Cordelia Truck Scales are/will be located in a rural area, surrounded by agricultural uses. As such, there is no residential community in the immediate vicinity of the project. Consequently, there is little in the way of community impacts to mitigate on this project. However, it should be noted that air quality improvements resulting from the project will be of benefit to the surrounding communities.
- **Economic/Jobs Growth:** The I-80 Corridor's significant function as a regional commuter corridor, as a connector between the urban centers of the Bay Area and Sacramento, and as a major truck route between the Port of Oakland and distribution centers throughout the western

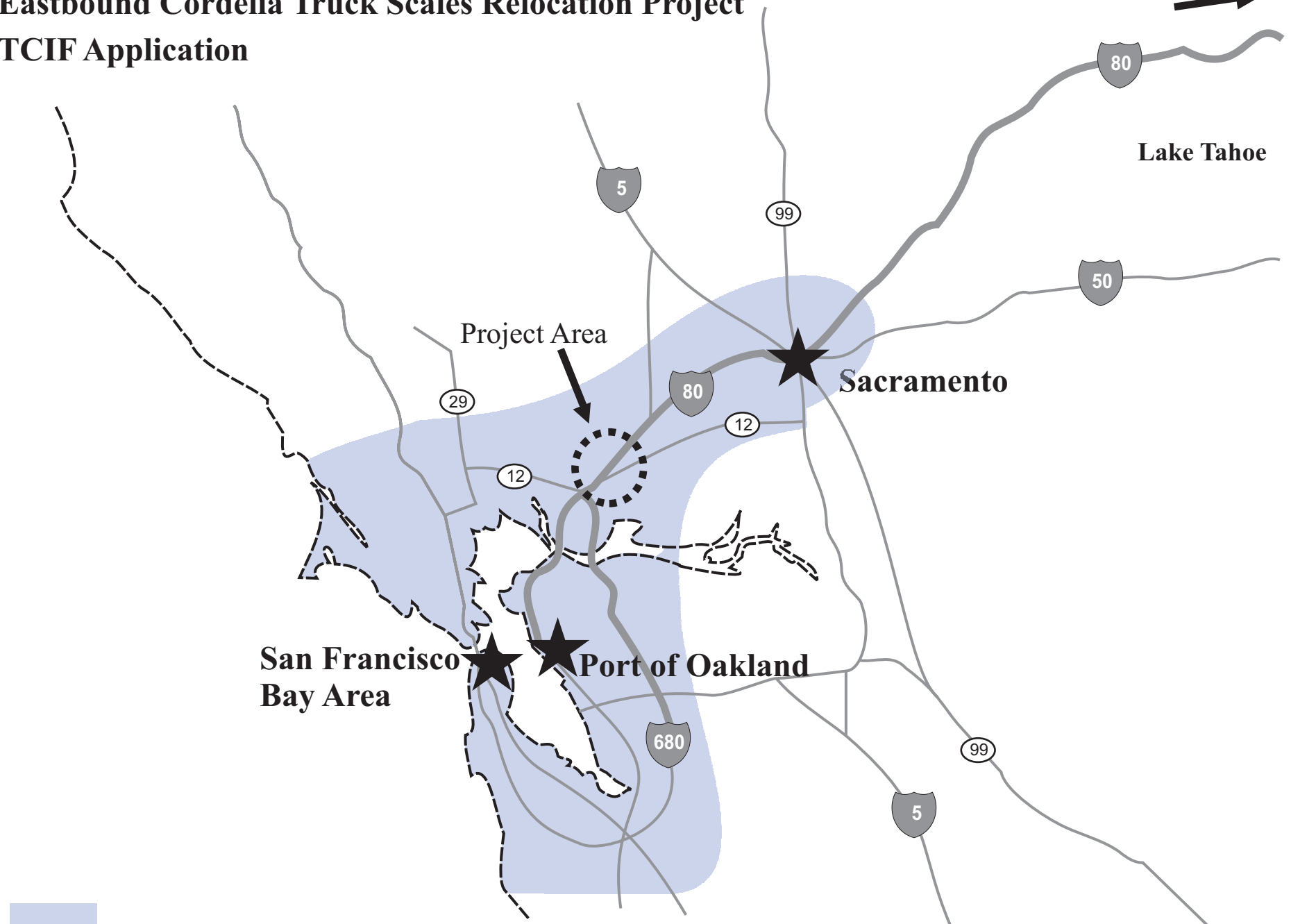
U.S., make this section of I-80 pivotal in providing access to jobs, housing, markets and commerce in California. The Eastbound Cordelia Truck Scales Relocation Project will facilitate a better connection between jobs and housing by reducing congestion and improving travel time, thereby reducing the annual hours of delay in the corridor. The Project will also result in economic growth by improving the capacity of the scales to process more trucks per hour—thereby increasing the throughput of this important element of regional and transcontinental trucking. Access to markets will be improved and commerce will be more efficiently conducted.

### **Conclusion**

The I-80 Corridor is a vital thread in the economic web of California. In addition to being an important regional commuter route, it provides a key route for the distribution of goods from the Pacific Rim to the northern part of the state and the western U.S beyond. There is a commitment in the region to maximize and sustain any mobility gains in the corridor, but technology alone can not provide the improved safety and operations that will allow the corridor to continue to function efficiently in its role. Relocating the Truck Scales in this corridor is a critical step in improving the overall mobility in this economically significant region. The new scales facility—and its respective redesigned ramps—will provide an overall benefit to goods movement and safety within the corridor.

**Eastbound Cordelia Truck Scales Relocation Project  
TCIF Application**

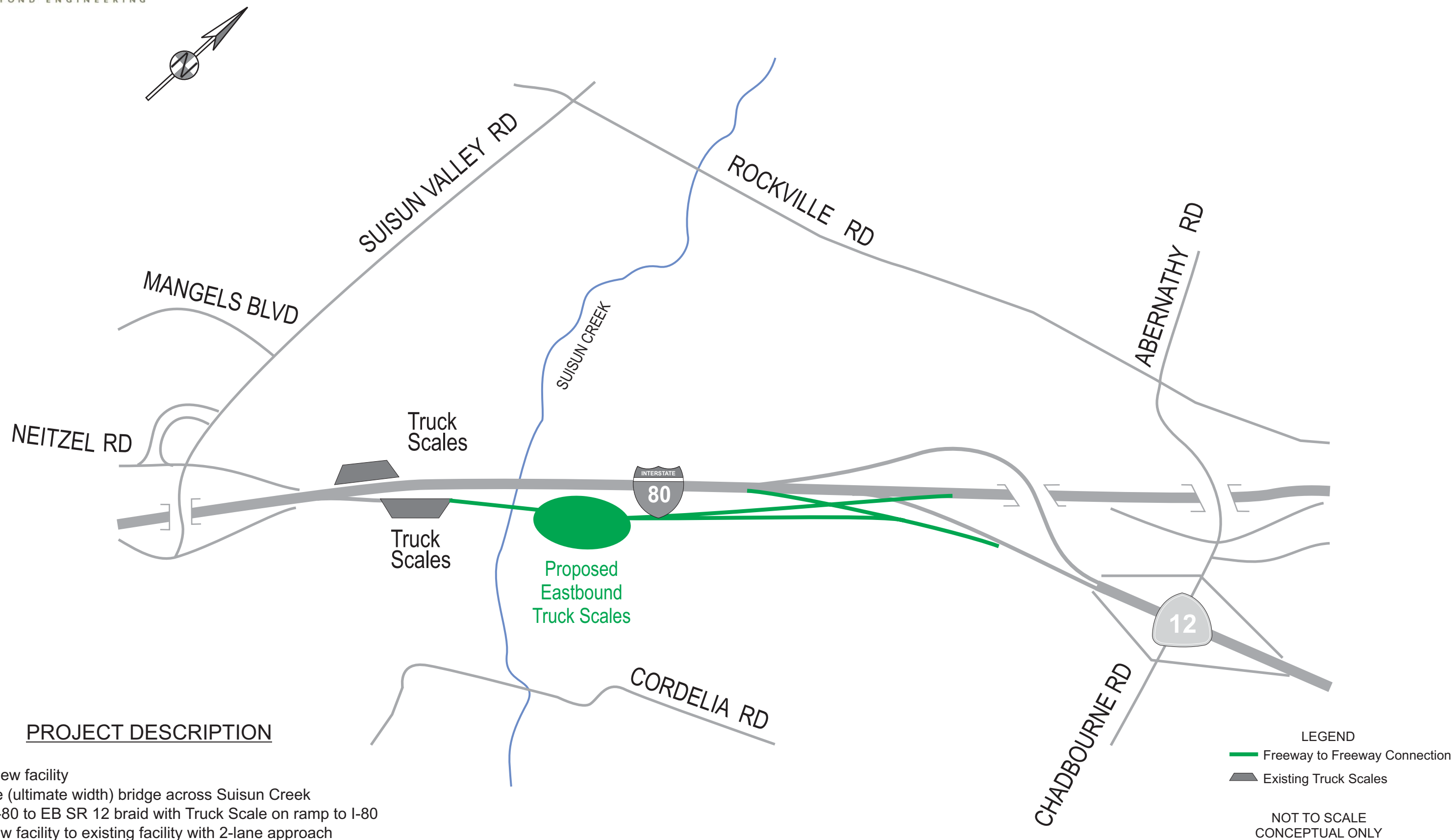
To Lake Tahoe, Reno, and east coast by truck  
➔



 urbanized area

**Project Location**

# EASTBOUND CORDELIA TRUCK SCALES RELOCATION PROJECT



# Proposition 1B Trade Corridors Improvement Fund I-80 Eastbound Cordelia Truck Scales Relocation Project

## Application Attachments

- 6-Page Cost Estimate
- Additional Traffic Information
- Additional Air Quality Information
- Letters of Support
  - Congressmembers Tauscher and Miller
  - State Legislative Delegation:
    - Assemblymember Lois Wolk
    - Assemblymember Noreen Evans
    - Senator Michael J. Machado
    - Senator Pat Wiggins
  - Solano Economic Development Corporation

## PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE 04-Sol-80/680

PSR, PR, etc.): PR

Program Code:

KP: 0

EA: 0

Project Description: PP No. : 0

Limits: ***TRUCK SCALES - East Bound***

Proposed Improvement: **Construct New Truck Scale Facility together with the I-80/SR 12 exit braid, tie to**  
(Scope) **existing truck scale ramp exit**

(1) RIGHT OF WAY & UTILITY	\$2,220,000
(2) CONSTRUCTION PHASE	
ROADWAY ITEMS	\$26,005,000
STRUCTURE ITEMS	\$17,669,000
<b>SUBTOTAL CONSTRUCTION PHASE</b>	<b>\$45,894,000</b>

Change Order Contingency - 10%	\$4,590,000	
Project Reserve - 10%	\$4,590,000	
Subtotal	<u>\$9,180,000</u>	\$55,074,000

Soft Costs (35%)	\$19,275,900	
Env. Mitigation	In Proj Reserve	
Subtotal	<u>\$19,275,900</u>	\$74,349,900

**SUBTOTAL ALTERNATIVE COST** **\$74,300,000** 2006 dollars

**Total Alternative Cost** **\$99,600,000** 2012 dollars w/5% escalation

Reviewed by	(925) 938-0383	10/13/06
Project Engineer	Mike Lohman (Phone)	(Date)
Approved by	(925) 938-0383	10/13/2006
Project Manager	Mike Lohman (Phone)	(Date)



## PRELIMINARY PROJECT COST ESTIMATE SUMMARY

<u>DIST - CO - RTE</u>	<u>04-Sol-80/680</u>
KP:	<u>0</u>
EA:	<u>0</u>
PP No. :	<u>0</u>

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
<u>Section 1 - Earthwork</u>					
Roadway Excavation	<u>60,000</u>	<u>CY</u>	<u>\$11</u>	<u>\$666,000</u>	
Roadway Excavation - Site	<u>70,000</u>	<u>CY</u>	<u>\$11</u>	<u>\$777,000</u>	
Imported Borrow	<u>0</u>	<u>CY</u>	<u>\$13</u>	<u>\$0</u>	
Earthwork - Site Access	<u>1</u>	<u>LS</u>	<u>\$3,330,000</u>	<u>\$3,330,000</u>	
Clearing & Grubbing	<u>1</u>	<u>LS</u>	<u>\$222,000</u>	<u>\$222,000</u>	
Develop Water Supply	<u>1</u>	<u>LS</u>	<u>\$0</u>	<u>\$0</u>	
				<u>Total Earthwork</u>	<u>\$4,995,000</u>
<u>Section 2 - Structural Section *</u>					
Pavement	<u>100,000</u>	<u>SF</u>	<u>\$8</u>	<u>\$777,000</u>	
Pavement - Site	<u>840,000</u>	<u>SF</u>	<u>\$6</u>	<u>\$4,662,000</u>	
Blanket & Edge Drains	<u>5,300</u>	<u>LF</u>	<u>\$22</u>	<u>\$117,660</u>	
				<u>Total Structural Section</u>	<u>\$5,556,660</u>
<u>Section 3 - Drainage</u>					
Large Drainage Facilities (Raines Drain)	<u>1</u>	<u>LS</u>	<u>\$555,000</u>	<u>\$555,000</u>	
Channel Improvements	<u>1</u>	<u>LS</u>	<u>\$555,000</u>	<u>\$555,000</u>	
Project Drainage	<u>1</u>	<u>LS</u>	<u>\$444,000</u>	<u>\$444,000</u>	
				<u>Total Drainage</u>	<u>\$1,554,000</u>

\* Attach sketch showing typical structural section elements of the roadway.  
Include (if available) T.I., R-Value, and date when tests were performed

## PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE	04-Sol-80/680
KP:	0
EA:	0
PP No. :	0

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
<u>Section 4 - Specialty Items</u>					
Retaining Wall	0	SF	\$51	\$0	
Sound Wall	0	SF		\$0	
Concrete Barrier	0	LF	\$77	\$0	
Metal Beam Guard Rail	300	LF	\$33	\$9,990	
Landscaping/Irrigation (normally separate project)	0.0	Ac	\$34,000	\$0	
SWPPP	1	LS	\$444,000	\$444,000	
Environmental Mitigation	0	LS		\$0	
Truck Scales-1static/4WIM/Signals	1	LS	\$1,362,500	\$1,362,500	
Sorter WIM	0	LS	\$300,000	\$0	
Truck Bypass System	0	LS	\$300,000	\$0	
Aerial Lead	1	LS	\$222,000	\$222,000	
AC Dike	0	LF	\$5	\$0	
Minor Concrete	0	SF	\$8	\$0	
New Truck Facility Site	0	EA	\$0	\$0	
				<u>Total Specialty Items</u>	<u>\$2,038,490</u>
<u>Section 5 - Traffic Items</u>					
Lighting	1	LS	\$222,000	\$222,000	
Traffic Signals	0	EA	\$50,000	\$0	
Ramp Meters	0	EA	\$80,000	\$0	
Permanent Signing	1	LS	\$222,000	\$222,000	
Striping	30,000	LF	\$1	\$33,300	
Traffic Control System	1	LS	\$1,110,000	\$1,110,000	
Remove Yellow Thermoplastic Stripe	6,500	LF	\$4	\$28,860	
				<u>Total Traffic Items</u>	<u>\$1,616,160</u>
				<u>SUBTOTAL SECTIONS 1 - 5:</u>	<u>\$15,760,310</u>

## PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE    04-Sol-80/680  
KP:                    0  
EA:                    0  
PP No. :              0

				<u>Unit Cost</u>	<u>Section Cost</u>
<u>Section 6 - Minor Items</u>					
Subtotal Sections 1 - 5	<u>\$15,760,310</u>	X	<u>10%</u>	<u>\$1,576,031.00</u>	
				TOTAL MINOR ITEMS:	<u>\$1,576,000</u>
<u>Section 7 - Roadway Mobilization</u>					
Subtotal Sections 1 - 5	<u>\$15,760,310</u>				
Minor Items	<u>\$1,576,000</u>				
Sum	<u>\$17,336,310</u>	X	<u>10%</u>	<u>\$1,733,631.00</u>	
				TOTAL ROADWAY MOBILIZATION	<u>\$1,734,000</u>
<u>Section 8 - Roadway Additions</u>					
Supplemental					
Subtotal Sections 1 - 5	<u>\$15,760,310</u>				
Minor Items	<u>\$1,576,000</u>				
Sum	<u>\$17,336,310</u>	X	<u>10%</u>	<u>\$1,733,631.00</u>	
Contingencies					
Subtotal Sections 1 - 5	<u>\$15,760,310</u>				
Minor Items	<u>\$1,576,000</u>				
Sum	<u>\$17,336,310</u>	X	<u>30%</u>	<u>\$5,200,893.00</u>	
				TOTAL ROADWAY ADDITIONS	<u>\$6,935,000</u>
				TOTAL ROADWAY ITEMS	<u>\$26,005,000</u>
				(Total of Sections 1 - 8)	

Estimate			
Prepared By:	<u>Mike Lohman</u>	<u>(925) 938-0383</u>	<u>10/13/06</u>
	(Print Name)	(Phone)	(Date)

## PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE 04-Sol-80/680

KP: 0

EA: 0

PP No. : 0

### II. STRUCTURES ITEMS

#1

Bridge Name	<u>Total of all</u>	<u>Truck Scale</u>		
	<u>structures</u>	<u>Office &amp;</u>		
Structure Type		<u>Insp Facility</u>		
Additional Width (LF)				
Span Lengths (LF)				
Total Area (SF)	<u>32,000</u>	<u>20,700</u>		
Footing Type (pile/spread)				
Cost per SF	<u>\$185</u>	<u>\$430</u>		
Including:				
Mobilization: 10%		<u>\$890,100</u>		
Contingency: 25%		<u>\$1,958,220</u>		
Other				
Total Cost For Structure	<u>\$5,920,000</u>	<u>\$11,749,320</u>	<u>\$0</u>	<u>\$0</u>
			<u>SUBTOTAL THIS PAGE</u>	<u>\$17,669,320</u>
			<u>TOTAL STRUCTURES ITEMS</u>	<u>\$17,669,000</u>
Railroad Related Costs				

COMMENTS:

Estimate Prepared By:

Mike Lohman  
(Print Name)

(925) 938-0383  
(Phone)

10/13/06  
(Date)

## PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE 04-Sol-80/680

KP: 0

EA: 0

PP No. : 0

### III. RIGHT OF WAY

Right-of-Way estimates should consider the probable highest and best use and type and intent of improvements at the time of acquisition. Assume acquisition including utility relocation occurs at the right of way certification milestone as shown in the Funding and Scheduling Section of the PSR. For further guidance see Chapter 1, Caltrans Right of Way Procedural Handbook.

	Current Values (Future Use)	Escalation Rate (%/yr)	Escalated Value *
Acquisition, including excess lands and damages to remainders ***	37 Ac @ \$30,000/Ac		\$1,110,000
	100% Contingency		\$1,110,000
Utility Relocation			\$0
Clearance / Demolition			In Contingency
RAP			In Contingency
R/W Services - Title and Escrow Fees			In Contingency
CONSTRUCTION CONTRACT WORK			In Contingency
TOTAL RIGHT OF WAY ** (CURRENT VALUE)		TOTAL ESCALATED RIGHT OF WAY	\$2,220,000

\* - Escalated to assumed year of advertising:

\*\* - Current total value for use on sheet 1 of 6, does not include value enhancement cost

Estimate prepared by: Mike Lohman (925) 938-0383 10/13/06  
(Print Name) (Phone) (Date)

## Documentation Supporting the Application—Traffic Benefits

### 1. Freight System (Goods Movement) Factors:

**Throughput:** The Cordelia Truck Scales relocation and reconstruction project will increase the truck processing rate from the current 300 trucks per hour to 1,000 trucks per hour. The project will accomplish this through both physical capacity expansion (longer on and off-ramps, more weigh and inspection lanes, and higher-speed ‘racetrack’ design ), and updated operational procedures.

The need to relocate and reconstruct the Cordelia Truck Scales was documented in the *I-80/I-680/I-780 Corridor Major Investment Study (July 2004)*. That study identified the project as a recommended mid-term improvement, necessary to address the current and projected future congestion at the scales themselves and on the ‘Segment 1’ portion of the corridor (I-80 between SR 12 West and SR 12 East). While the MIS was being prepared, a related study of the costs and benefits of moving the scales entirely out of the interchange area versus reconstructing the scales within the interchange was undertaken. That study identified the significant truck volume growth expected through the years 2025 and 2040, as shown in Table 1 below. Without accounting for an increase in “pre-pass” use, the volumes are expected to grow by 70% to 2025, and by 115% to 2040. With an assumed 15 percent reduction to approximate increased pre-pass use, the truck volumes accessing the scales would still grow by 45 percent to 2025 and by 82 percent to 2040. The design volume for the reconstructed scales is 1,000 vehicles per hour, almost double the current peak hour truck volume on Eastbound I-80.

Table 1 Existing and Forecast Peak Hour Truck Volumes					
Location	Existing PHTV	Year 2025 PHTV	Year 2025 PHTV With 15% Pre-pass Reduction	Year 2040 PHTV	Year 2040 PHTV With 15% Pre-pass Reduction
WB I-80 at Scales	524	890	757	1,127	958
EB I-80 at Scales	552	940	799	1,187	1,009
WB I-80 at Travis Blvd.	401	680	578	863	734
EB I-80 at Travis Blvd.	417	710	604	897	763
Source: Cordelia Truck Scales Relocation Study, Summary Report and Recommendations, February 16, 2005					

**Velocity:** The Cordelia Truck Scales Relocation and Reconstruction Project will increase the speed of freight traffic by (1) processing trucks at the scales more quickly and efficiently (1,000 trucks per hour as compared to the current processing rate of 300 trucks per hour); (2) providing better diverge and merge operations at the scales off and on-ramps through the provision of longer ramps that allow for higher merge and diverge speeds (approximately \_\_\_\_ feet for the on-ramps and off-ramps, as compared to the current \_\_\_\_ feet), and (3) helping resolve congestion in the vicinity of the scales on- and off-ramps by providing better spacing between the ramp merge and diverge points and upstream/downstream local and freeway-to-freeway connector ramps.

**Reliability:** The Cordelia Truck Scales Relocation and Reconstruction Project will contribute significantly to the reduction of travel time variability and unpredictability, in two main ways: (1) The Project’s on and off ramps will be longer and will provide better spacing with adjacent ramps, thus reducing congestion near the merge and diverge points on I-80; and (2) the higher processing rate provided by the new scales will eliminate the congestion that results from trucks slowing in the outside lanes as they approach the scales, which often have long queues extending most of the

length of the off-ramp. (When the queues extend onto the mainline, the truck scales are temporarily closed for safety reasons).

## 2. Transportation System (Priorities) Factors

**Safety:** The Cordelia Truck Scales Relocation and Reconstruction Project will increase the safety of the traveling public by improving traffic operations near the truck scales off-ramps and on-ramps, through better ramp spacing and provision of longer ramps to allow higher-speed diverge and merge movements and more queue storage. The Truck Scales project will ensure that truck queues within the scales are contained on the off-ramp, avoiding the upstream effects of long truck queues backing up to the off-ramp gore point.

Recent accident rates demonstrate the safety effects of the existing Truck Scales. Accident data for three years, 2004 – 2006, from the Caltrans Traffic Accident Surveillance and Analysis System (TASAS) for I-80 in the vicinity of the Cordelia Truck Scales is shown in Table 2. Locations where the actual accident rate exceeds the statewide average for similar facilities are shaded in the table. The total accident rates for most segments of I-80 between Red Top and Air Base Parkway exceed the average rate for similar facilities. Fatal and/or fatal plus injury accident rates exceed the statewide average on each I-80 segment. The highest total accident rate is seen on I-80 between the I-80/I-680 Connector Structure to the Suisun Valley Overcrossing, which is adjacent to the Truck Scales ramps (just west of the Eastbound off-ramp and the westbound on-ramp.)

**TABLE 2  
ACCIDENT HISTORY  
JANUARY 1, 2004 TO DECEMBER 31, 2006**

Location	Post Mile	Number of Accidents			Actual Accident Rate (acc/million veh miles)			Average Accident Rate (acc/million veh miles)		
		Total	Fatal	F + I	Total	Fatal	F + I	Total	Fatal	F + I
I-80 -- Westerly Project Limit to Red Top Road U/C	10.89 to 11.39	86	0	19	<b>1.29</b>	<b>0.000</b>	<b>0.29</b>	0.82	0.004	0.26
I-80 -- Red Top Road U/C to SR 12W/I-80 Connector Structure	11.39 to 11.98	83	0	19	<b>1.05</b>	0.000	<b>0.24</b>	0.83	0.004	0.24
I-80 -- SR 12W/I-80 U/C to Green Valley Road O/C	11.98 to 12.74	157	1	36	1.20	0.008	0.27	0.94	0.005	0.30
I-80 -- Green Valley Road O/C to I-680/I-80 Connector Structure	12.74 to 13.09	117	1	24	1.63	0.014	0.33	1.05	0.005	0.33
I-80 -- I-680/I-80 Connector Structure to Suisun Valley Road O/C	13.09 to 13.49	158	0	34	<b>1.81</b>	0.000	<b>0.39</b>	1.10	0.006	0.35
I-80 -- Suisun Valley Road O/C to SR 12E/I-80 Connector Structure	13.49 to 15.81	598	1	137	<b>1.10</b>	<b>0.002</b>	<b>0.25</b>	1.04	0.006	0.34
I-80 -- SR 12E/I-80 Connector Structure to Abernathy Road O/C	15.81 to 16.17	61	1	18	<b>0.83</b>	0.014	<b>0.24</b>	1.05	0.005	0.33
I-80 -- Abernathy Road O/C to West Texas Street U/C	16.17 to 17.20	200	2	63	<b>0.95</b>	0.010	0.30	1.05	0.005	0.33
Notes: Shading denotes locations that exceed the statewide average accident rate.										
Source: Caltrans TASAS data, 2004 – 2006										

**Congestion Reduction/Mitigation:** The Cordelia Truck Scales Relocation and Reconstruction Project will reduce traffic delays on I-80 for all vehicles, and will improve access to the scales for trucks.

The I-80/I-680 junction and the truck scales in Cordelia create major congestion on I-80 in Fairfield during both the AM and PM peak periods. Currently, congestion develops during the commute peak hours due to trucks weaving with traffic streams destined to/from the I-680 connector ramps, the local Suisun Valley/Green Valley ramps, and the SR 12 East and West connector ramps. This congestion will worsen significantly by 2035. The AM peak hour congestion extends from the I-80/I-680 junction to West Texas Street, a distance of nearly 4.5 miles. Heavy westbound on-ramp volumes from the SR 12 East and Air Base Parkway interchanges also contribute to the congestion during the AM peak period. During the PM peak period, heavy eastbound on-ramp volumes from the SR 12 West and the truck queues combines to create congestion on eastbound I-80 in the I-80/I-680/SR 12 Interchange, while the heavy on- and off-ramp traffic along eastbound I-80 from West Texas Street to Air Base Parkway create congestion just east of the I-80/I-680/SR 12 Interchange.

The I-80 mainline traffic volume is projected to grow by about 2 percent per year, to 270,000 daily vehicles, in 2035. Along with the truck traffic growth described above, the traffic increases will severely worsen the current congestion and safety conditions, if the scales are not expanded to accommodate the higher truck volumes and moved to a location that provides for maximum weaving lengths and for braiding critical traffic streams. The projected 2035 weave volumes at the truck scales are shown in Tables 3 and 4.

Table 3 Westbound AM Weave Volumes 2035					
Location	Total Volume	To Truck Scales	To Suisun Valley Road	To I-680 South	To SR 12 West
From SR 12 East	3,989	<b>155</b>	5	1,315	845
From I-80 East of SR 12 East	9,905	<b>655</b>	690	2,590	1,355
Source: Solano-Napa Travel Demand Model, November 2006					

Table 4 Eastbound PM Weave Volumes 2035				
Location	Total Volume	To Suisun Valley Road	To Truck Scales	To SR 12 East
From I-680	3,935	495	<b>95</b>	810
From I-80 West of SR 12 West	9,580	340	<b>320</b>	1,765
From Suisun Valley Road	1,985	--	--	435
From SR 12 West	2,420	5	<b>70</b>	555
Source: Solano-Napa Travel Demand Model, November 2006				

The truck scales reconstruction will allow these weaves to occur over a longer distance, since the scales will be located optimally between the SR 12 East connectors and the Suisun Valley Road/Green Valley Road ramps. The project will also lengthen the off-ramps and on-ramps to the



scales, so that queues can be accommodated off the mainline and merge-diverge operations do not interfere with right-hand lane traffic flows. Finally, the scales reconstruction will facilitate the ultimate braiding of adjacent weave movements, including the SR 12 East to I-80 connectors and the east side ramps to Suisun Valley Road. These changes will significantly improve the outside-lanes congestion along I-80 between SR 12 West and Air Base Parkway. This will improve the access to the Truck Scales for all trucks.

Cordelia Truck Scales Reconstruction: Air Quality Calculations for TCIF Application

Air calculations shown in rows 6 through 45.  
Air calculations based in part on EMFAC2007 runs for Solano County. The results of those runs are shown below in rows 50 through 215.

Truck Volumes (from Cordelia Truck Scales Reconstruction)		
	Year 2040	Year 2040 Rounded*
West Bound	958	960
East Bound	1009	1000
<p>Year 2040 Peak Hour Volumes from Cordelia Truck Scales Reconstruction Traffic Fact Sheet, which was based on Cordelia Truck Scales Relocation Study, Summary Report and Recommendations, February 16, 2005.</p> <p>Year 2040 Rounded based on phone conversation with Ellen Polling, Fehr &amp; Peers (1/7/2008).</p> <p>Design of existing scales equals 500 trucks per hour (for each side of the freeway).</p> <p>Design of reconstructed scales equals 1000 trucks per hour (for each side of the freeway).</p> <p>In 2035, the reconstructed scales can handle the peak hour truck volumes without excessive idling. Trucks are assumed to travel through the scales at 3 mph for unloaded trucks and 5 mph for loaded.</p> <p>In 2035, assuming no reconstructed scales, the existing scales could handle 500 trucks per hour per side of freeway. Consequently, west bound would have 460 trucks in excess of capacity (960-500).</p> <p>East bound trucks would have 500 trucks in excess of capacity (1000-500). Combined west bound and east bound would have 960 trucks in excess of capacity during the peak hour.</p>		

Table 1. Existing and Future Truck Scale Volumes Compared to Total Traffic Volumes

	Existing	2035
Trucks per day	11,800	25,300
Trucks peak hour	1,076	2,062
Total traffic volume	145,000	270,000

Trucks volumes based on Project Background included in Solano Transportation Authority's Cordelia Truck Scales Relocation Project - Phase 1 - Eastbound Scales (\$99.6 million) Ensuring I-80 Trade Corridor Goods Movement Reliability

Table 2. Existing and Future Truck Scale Related Emissions

Truck Emissions (pounds per day)

	ROG	Nox	CO	PM10
Existing Truck Scale	85.9	257.7	195.2	20.0
New Truck Scale 2035	31.0	97.5	86.7	2.0
Existing Truck Scale 2035	34.7	152.3	108.3	2.1

Truck emissions assume all trucks are heavy-duty.

Trucks assumed to travel 1/4 mile within the truck scale area including off- and on-ramps.

Calculations for Existing Truck Scale 2035 include an estimate for 960 trucks idling for a total of 15 minutes per day (7.5 minutes for two peak hours per day.)

EMFAC Runs

Title : Solano County Avg Annual CYrs 2008 and 2035 Default Title

Version : Emfac2007 V2.3 Nov 1 2006

Run Date : 2008/01/07 14:00:00

Scen Year: 2008 -- All model years in the range 1965 to 2008 selected

Season : Annual

Area : Solano

\*\*\*\*\*

Year: 2008 -- Model Years 1965 to 2008 Inclusive -- Annual

Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average                      Solano                      County Average

Table 1: Running Exhaust Emissions (grams/mile; grams/idle-hour)

Pollutant Name: Reactive Org Gases      Temperature: 60F    Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	3.914	11.742	0	0	1.269
3	0.67	0.768	0.908	13.218	3.173	5.471	1.623
5	0.561	0.645	0.8	13.218	3.173	5.471	1.518
10	0.373	0.432	0.531	7.509	2.184	4.268	0.931
15	0.26	0.304	0.37	3.741	1.565	3.488	0.556
60	0.107	0.123	0.125	1.128	0.456	4.775	0.232

Pollutant Name: Carbon Monoxide      Temperature: 60F   Relative Humidity: 50%

Speed								
	MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
	0	0	0	24.069	48.12	0	0	6.197
	3	6.897	8.677	9.097	30.048	17.39	39.616	9.652
	5	6.393	8.037	8.587	30.048	17.39	39.616	9.142
	10	5.4	6.761	6.788	21.791	11.279	32.64	7.402
	15	4.678	5.835	5.597	15.966	7.752	28.271	6.172
	60	2.863	3.547	3.343	5.759	3.512	74.756	4.082

Pollutant Name:      Oxides of Nitrogen      Temperature: 60F   Relative Humidity: 50%

Speed								
	MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
	0	0	0	6.412	90.603	0	0	6.843
	3	0.543	0.95	1.63	39.659	24.424	1.115	3.469
	5	0.512	0.893	1.575	39.659	24.424	1.115	3.429
	10	0.449	0.77	1.357	27.571	18.839	1.145	2.516
	15	0.402	0.679	1.203	20.219	15.29	1.179	1.948
	60	0.336	0.574	1.259	17.325	20.442	1.614	1.71

Pollu	tant	Name:	Carbon D	ioxide	Temperature: 60F		Relative Humidity: 50%	
Speed MPH		LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0		0	0	1057.739	5674.022	0	0	509.906
3		1082.345	1317.853	1824.51	3352.802	2533.875	232.507	1396.565
5		957.698	1166.893	1663.037	3352.802	2533.875	232.507	1268.581
10		723.94	883.807	1233.285	2764.737	2375.467	197.707	972.95
15		568.003	694.965	956.323	2291.608	2281.922	171.322	771.538
60		340.561	419.53	572.625	1547.183	2170.768	115.431	476.518

Pollu	tant	Name:	PM10	Temperature: 60F		Relative Humidity: 50%		
Speed MPH		LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0		0	0	0.071	1.839	0	0	0.132
3		0.078	0.137	0.136	3.079	0.62	0.06	0.306
5		0.065	0.115	0.116	3.079	0.62	0.06	0.29
10		0.042	0.076	0.078	2.101	0.449	0.048	0.196
15		0.029	0.053	0.055	1.387	0.336	0.039	0.131
60		0.011	0.019	0.019	0.751	0.123	0.054	0.064

Title : Solano County Avg Annual CYrs 2008 and 2035 Default Title  
Version : Emfac2007 V2.3 Nov 1 2006  
Run Date : 2008/01/07 14:00:00

Scen Year: 2035 -- All model years in the range 1991 to 2035 selected

Season : Annual  
Area : Solano

\*\*\*\*\*

Year: 2035 -- Model Years 1991 to 2035 Inclusive -- Annual  
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average                      Solano                      County Average

Table 1: Running Exhaust Emissions (grams/mile; grams/idle-hour)

Pollutant Name: Reactive Org Gases      Temperature: 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	3.901	7.003	0	0	0.932
3	0.047	0.086	0.13	2.222	1.1	4.822	0.27
5	0.038	0.069	0.108	2.222	1.1	4.822	0.258
10	0.024	0.041	0.067	1.227	0.773	3.626	0.156
15	0.016	0.028	0.046	0.604	0.566	2.869	0.095
60	0.006	0.01	0.016	0.15	0.184	3.516	0.056

Pollutant	Name:	Carbon Monoxide	Temperature: 60F	Relative Humidity: 50%			
Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	24.407	40.967	0	0	5.638
3	0.868	1.394	2.062	6.222	8.238	23.862	1.801
5	0.836	1.341	1.996	6.222	8.238	23.862	1.761
10	0.762	1.221	1.746	3.883	5.335	20.312	1.455
15	0.696	1.115	1.552	2.413	3.662	17.937	1.239
60	0.351	0.563	0.775	1.541	1.649	35.031	0.927

Pollutant	Name:	Oxides of Nitrogen	Temperature: 60F	Relative Humidity: 50%			
Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	4.741	103.706	0	0	7.595
3	0.071	0.123	0.25	6.998	11.171	1.276	0.608
5	0.067	0.116	0.242	6.998	11.171	1.276	0.603
10	0.058	0.101	0.21	5.282	8.668	1.218	0.47
15	0.052	0.09	0.187	4.061	7.081	1.18	0.375
60	0.037	0.066	0.185	2.347	9.482	1.376	0.249



Pollutant	Name:	Carbon Dioxide	Temperature: 60F	Relative Humidity: 50%			
Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	1082.053	5694.694	0	0	513.271
3	1041.8	1333.255	1871.549	3368.876	2409.521	266.402	1384.7
5	921.701	1179.58	1710.151	3368.877	2409.521	266.402	1258.555
10	696.49	891.404	1260.095	2776.747	2107.025	222.061	963.619
15	546.255	699.166	971.152	2299.983	1928.391	190.73	762.658
60	327.13	418.777	573.245	1549.453	1716.132	197.505	469.197

Pollutant	Location	Name:	PM10	Temperature: 60F	Relative Humidity: 50%			
Speed MPH		LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0		0	0	0.048	0.219	0	0	0.02
3		0.079	0.154	0.178	0.145	0.337	0.03	0.119
5		0.066	0.128	0.15	0.145	0.337	0.03	0.101
10		0.042	0.083	0.097	0.123	0.242	0.024	0.067
15		0.029	0.056	0.067	0.106	0.18	0.019	0.048
60		0.01	0.02	0.023	0.135	0.064	0.026	0.024



# 2008 Project Programming Request

## (Project Information)

General Instructions

<input checked="" type="checkbox"/> New Project		<input type="checkbox"/> Amendment (Existing Project)		Date:	01/14/08
Caltrans District	EA	PPNO	MPO ID	TCRP No.	
04	4A070	104			
County	Route/Corridor	Project Sponsor/Lead Agency		MPO	Element
ALA	580	Caltrans		MTC	CO
<b>Project Title</b>					
Eastbound Truck Climbing Lane					
PM Bk	PM Ahd	Project Mgr/Contact	Phone	E-mail Address	
4.9	8.2	Issa Bouri	510-286-5220	<a href="mailto:issa_bouri@dot.ca.gov">issa_bouri@dot.ca.gov</a>	
<b>Location, Project Limits, Description, Scope of Work, Legislative Description</b>					
On Route 580 in Alameda County in the city of Livermore from North Flynn Road to Greenville Road. Construct a truck-climbing lane in the eastbound direction.					
Component	Implementing Agency		AB 3090	Letter of No Prejudice	
PA&ED	CALTRANS		<input type="checkbox"/>	<input type="checkbox"/>	
PS&E	CALTRANS		<input type="checkbox"/>	<input type="checkbox"/>	
Right of Way	CALTRANS		<input type="checkbox"/>	<input type="checkbox"/>	
Construction	CALTRANS		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Legislative Districts</b>					
Assembly: 15		Senate: 7			
Congressional: 10					
<b>Purpose and Need</b>					
Purpose: Enhance the movement of goods between the San Francisco Bay Area and the Central Valley. Need: Improve freeway safety and operations, relieve traffic congestion and delay during PM peak period by separating slow-moving truck traffic from existing mixed-flow lanes traffic.					
<b>Project Benefits</b>					
Approximately 3.3 miles of truck-climbing lane will be added. Per highway operational analysis report dated November 26, 2007, the addition of the truck lane could reduce the duration of the peak period by half an hour.					
<b>Project Milestone</b>					<b>Date</b>
Project Study Report Approved					02/29/08
Begin Environmental (PA&ED) Phase					08/01/08
Circulate Draft Environmental Document				Document Type	ND/FONSI
Draft Project Report					01/01/10
End Environmental Phase (PA&ED Milestone)					07/31/10
Begin Design (PS&E) Phase					08/01/10
End Design Phase (Ready to List for Advertisement Milestone)					11/31/2012
Begin Right of Way Phase					08/01/10
End Right of Way Phase (Right of Way Certification Milestone)					11/31/2012
Begin Construction Phase (Contract Award Milestone)					04/01/13
End Construction Phase (Construction Contract Acceptance Milestone)					04/01/15
Begin Closeout Phase					05/01/15
End Closeout Phase (Closeout Report)					11/01/15



# 2008 Project Programming Request (Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104	0	4A070
<b>Project Title:</b> Eastbound Truck Climbing Lane				

Existing Total Project Cost									Implementing Agency
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Total Project Cost									Implementing Agency
E&P (PA&ED)	0	2,490	0	0	0	0	0	2,490	
PS&E	0	0	0	5,140	0	0	0	5,140	
R/W SUP (CT)	0	0	0	0	100	0	0	100	
CON SUP (CT)	0	0	0	0	0	5,530	0	5,530	
R/W	0	0	0	0	5	0	0	5	
CON	0	0	0	0	0	51,000	0	51,000	
TOTAL	0	2,490	0	5,140	105	56,530	0	64,265	

Fund No. 1:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)		2,490						2,490	100% of total project cost is proposed to be funded from the SHOPP portion of Trade Corridor Improvement Funds (TCIF).
PS&E				5,140				5,140	
R/W SUP (CT)					100			100	
CON SUP (CT)						5,530		5,530	
R/W					5			5	
CON						51,000		51,000	
TOTAL	0	2,490	0	5,140	105	56,530	0	64,265	

Fund No. 2:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	



# 2008 Project Programming Request (Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104	0	4A070
<b>Project Title:</b> Eastbound Truck Climbing Lane				

Fund No. 3:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	

Fund No. 4:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	

Fund No. 5:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	



# 2008 Project Programming Request (Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104	0	4A070
<b>Project Title:</b> Eastbound Truck Climbing Lane				

Fund No. 6:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	

Fund No. 7:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	

Fund No. 8:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	



# 2008 Project Programming Request (Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104	0	4A070
<b>Project Title:</b> Eastbound Truck Climbing Lane				

Fund No. 9:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	

Fund No. 10:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	

Fund No. 11:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	



# 2008 Project Programming Request (Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104	0	4A070
<b>Project Title:</b> Eastbound Truck Climbing Lane				

Fund No. 12:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	

Fund No. 13:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	

Fund No. 14:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (CT)	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON								0	
TOTAL	0	0	0	0	0	0	0	0	



# 2008 Project Programming Request

(Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104		4A070
Project Title: Eastbound Truck Climbing Lane				

Existing Total Project Cost									Implementing Agency
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	
E&P (PA&ED)									CALTRANS
PS&E									CALTRANS
R/W SUP (CT)									
CON SUP (CT)									
R/W									CALTRANS
CON									CALTRANS
TOTAL									
Net Change									
E&P (PA&ED)		2,490						2,490	
PS&E				5,140				5,140	
R/W SUP (CT)					100			100	
CON SUP (CT)						5,530		5,530	
R/W					5			5	
CON						51,000		51,000	
TOTAL		2,490		5,140	105	56,530		64,265	
Proposed New Result									
E&P (PA&ED)		2,490						2,490	
PS&E				5,140				5,140	
R/W SUP (CT)					100			100	
CON SUP (CT)						5,530		5,530	
R/W					5			5	
CON						51,000		51,000	
TOTAL		2,490		5,140	105	56,530		64,265	

Fund No. 1:	Existing Funding								Program Code
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Change									Notes
E&P (PA&ED)		2,490						2,490	
PS&E				5,140				5,140	
R/W SUP (CT)					100			100	
CON SUP (CT)						5,530		5,530	
R/W					5			5	
CON						51,000		51,000	
TOTAL		2,490		5,140	105	56,530		64,265	
Proposed Funding									
E&P (PA&ED)		2,490						2,490	
PS&E				5,140				5,140	
R/W SUP (CT)					100			100	
CON SUP (CT)						5,530		5,530	
R/W					5			5	
CON						51,000		51,000	
TOTAL		2,490		5,140	105	56,530		64,265	





## 2008 Project Programming Request (Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104		4A070
<b>Project Title:</b> Eastbound Truck Climbing Lane				

Fund No. 2:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Change									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 3:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Change									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									



# 2008 Project Programming Request

(Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104		4A070
Project Title: Eastbound Truck Climbing Lane				

<b>Fund No. 4:</b>									<b>Program Code</b>
<b>Existing Funding</b>									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	<b>Funding Agency</b>
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
<b>Change</b>									<b>Notes</b>
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
<b>Proposed Funding</b>									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

<b>Fund No. 5:</b>									<b>Program Code</b>
<b>Existing Funding</b>									
Component	Prior	08/09	09/10	10/11	11/12	12/13		Total	<b>Funding Agency</b>
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
<b>Change</b>									<b>Notes</b>
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
<b>Proposed Funding</b>									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									



## 2008 Project Programming Request (Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104		4A070
<b>Project Title:</b> Eastbound Truck Climbing Lane				

Fund No. 6:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Change									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 7:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Change									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									



## 2008 Project Programming Request (Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104		4A070
<b>Project Title:</b> Eastbound Truck Climbing Lane				

<b>Fund No. 8:</b>									<b>Program Code</b>
<b>Existing Funding</b>									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	<b>Funding Agency</b>
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
<b>Change</b>									<b>Notes</b>
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
<b>Proposed Funding</b>									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

<b>Fund No. 9:</b>									<b>Program Code</b>
<b>Existing Funding</b>									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	<b>Funding Agency</b>
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
<b>Change</b>									<b>Notes</b>
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
<b>Proposed Funding</b>									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									



# 2008 Project Programming Request

(Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104		4A070
Project Title: Eastbound Truck Climbing Lane				

<b>Fund No. 10:</b>									<b>Program Code</b>
<b>Existing Funding</b>									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	<b>Funding Agency</b>
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
<b>Change</b>									<b>Notes</b>
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
<b>Proposed Funding</b>									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

<b>Fund No. 11:</b>									<b>Program Code</b>
<b>Existing Funding</b>									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	<b>Funding Agency</b>
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
<b>Change</b>									<b>Notes</b>
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
<b>Proposed Funding</b>									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									



# 2008 Project Programming Request

(Funding Information)

(dollars in thousands and escalated to the programmed year)

Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104		4A070
Project Title: Eastbound Truck Climbing Lane				

Fund No. 12:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Change									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 13:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Change									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									



## 2008 Project Programming Request (Funding Information)

(dollars in thousands and escalated to the programmed year)

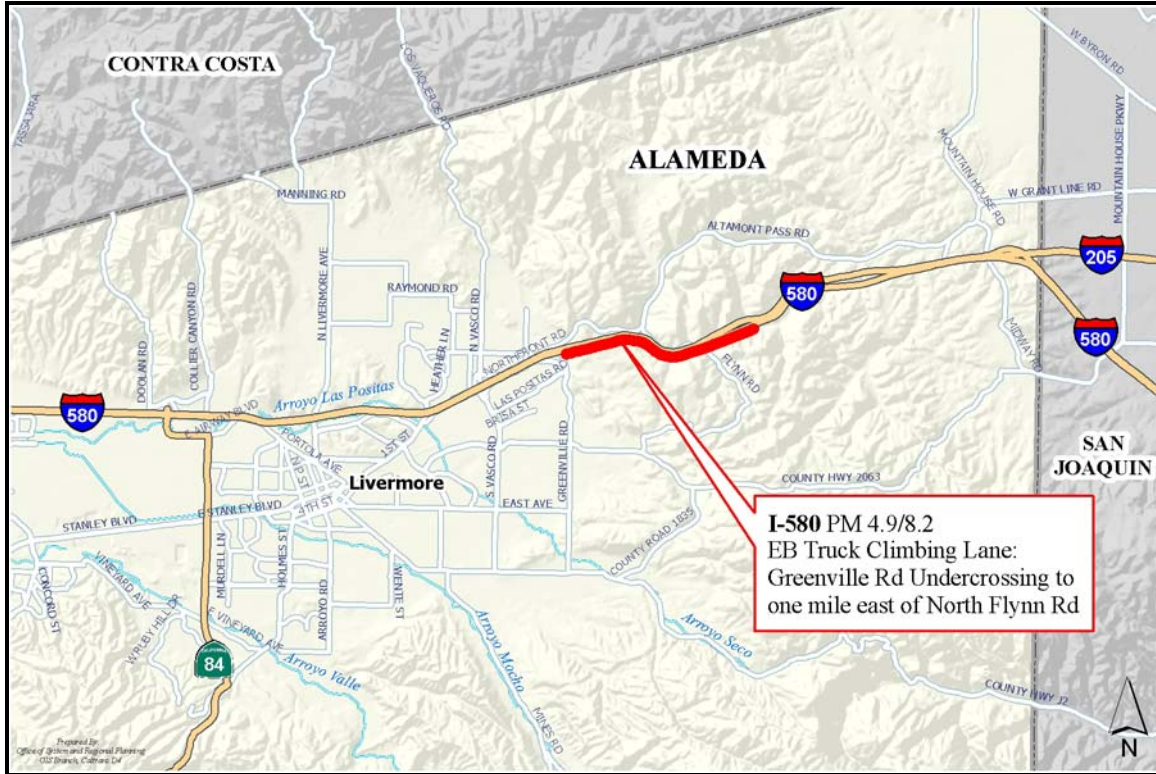
Date: 01/14/08

County	CT District	PPNO	TCRP Project No.	EA
ALA	04	104		4A070
Project Title: Eastbound Truck Climbing Lane				

Fund No. 14:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Change									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

# TRADE CORRIDORS IMPROVEMENT FUND (TCIF) PROJECT NOMINATION APPLICATION

## INTERSTATE 580 EASTBOUND TRUCK CLIMBING LANE



### Summary Narrative

#### **Project description**

The Interstate 580 (I-580) corridor is a crucial interregional trucking route and is the major connection for Goods Movement related traffic traveling between the Port of Oakland and Interstate 5 in the Central Valley. The project proposes to widen I-580 in Alameda County to construct a Truck Climbing Lane (TCL) in the eastbound (EB) direction over the Altamont Pass between the Greenville Road Undercrossing and one-mile east of North Flynn Road. The project will provide several safety and operational improvements. The project will relieve traffic congestion and delay during the PM peak period by separating slow-moving traffic from existing mixed-flow lanes. The project will also separate traffic weaving movements from the mainline. Finally, it will reduce vehicular emissions by allowing traffic speeds to increase and remain stable, resulting in more favorable air quality benefits. Implementing the proposed project will enhance the regional and interregional movement of goods, services and people as well as provide substantial economic benefits to the Bay Area Region, Central Valley Region, State and nation.

#### **Project Background, Purpose & Need**

The purpose of the I-580 TCL from Greenville Road to North Flynn Road (Altamont Summit) is to improve safety and operations, relieve congestion, reduce recurrent traffic congestion and delay as well as enhance the movement of goods between the San Francisco Bay Area and the Central Valley. Congestion in the I-580 Corridor is attributed to heavy commuter and freight related traffic during the



weekday. Significant growth in the region is projected to continue, resulting in further increases in congestion and delay. The Metropolitan Transportation Commission (MTC) travel projections show that the number of commuters to and from the Bay Area will nearly double over the next 20 years. One of the largest projected increases will come from the Central Valley via San Joaquin, Stanislaus, and Merced Counties. MTC's Transportation 2030 Plan (2005 RTP) lists numerous highway improvement projects within the I-580 Corridor including widening in both directions for High Occupancy Vehicle (HOV) lanes and auxiliary lanes from Tassajara Road to Greenville Road, an HOV direct connector from westbound I-580 to southbound I-680, eastbound I-580 truck climbing lane from Greenville Road to North Flynn Road (Altamont Summit), and I-580/Greenville Road interchange improvements.

### **Project Scope and Benefits**

The addition of this TCL would improve freeway safety and operations along the Interstate 580 Corridor and reduce the duration of PM peak period queuing within the project area in the eastbound direction. Approximately 3.3 new lane miles of TCL will be constructed. Three build alternatives as well as the no-build alternative were evaluated in the Project Study Report (PSR). The project proposes to widen and construct a new 12-foot lane plus a 12-foot shoulder on the right side of the eastbound direction. Widening for the new lane and shoulder is to be completed within the existing State right-of-way.

### **Transportation Corridor**

The I-580/I-238 Corridor is a 42 mile-long east-west route in Alameda County, the second most populous of the San Francisco Bay Area's nine counties. The corridor serves as a critical truck route and the major interregional corridor between the Port of Oakland and Interstate 5 in the Central Valley. It is also the primary route serving the Tri-Valley area including the cities of Pleasanton, Dublin, and Livermore. It provides for the movement of goods, freight and people in and out of the region. I-580 is a major "farm-to-market" route for agricultural products as well as a significant recreational route providing access between the San Francisco Bay Area, the Central Valley, the Sierra Nevada Mountains and Southern California throughout the year.

The I-580 Corridor is legislatively designated as part of the Interregional Road System (IRRS) and is a priority corridor in the Global Gateways Development Program. As an Interstate, it is automatically specified as a High Emphasis Route (HER) in the IRRS. HERs are IRRS routes of increasing importance to region-to-region travel as well as State to-and-through movement of people and goods. I-580 is considered a State lifeline route for emergency relief and is included by the State as an Intermodal Corridor of Economic Significance (ICES), critical to the movement of freight. Finally, it is part of the Federal National Highway System (NHS) that consists of roads that are of importance to the nation's economy, defense and mobility. With the high volume of truck traffic passing through the I-580 (Altamont Pass) Corridor it is clear that this route is a significant component of the State's and Bay Area's economies, and efforts should be made to ensure reasonable mobility for the trucking industry.

## **A) Screening Criteria:**

### **1. Eligibility:**

- a) Project is included in GMAP, Cal-MITSAC, trade infrastructure and goods movement plans adopted by regional transportation planning agencies, or an adopted regional transportation plan.

The I-580 Eastbound Truck Climbing Lane Project is included in the GMAP, Cal-MITSAC, MTC's Regional Goods Movement Study (2004) and the 2005 Regional Transportation Plan.

Project	GMAP	Cal-MITSAC	Adopted Regional Goods Movement Plan	RTP
I-580 Eastbound Truck Climbing Lane	√	√	√	√  (RTP ID 220013)

### **b) Match**

The total estimated escalated project cost is \$ 64.3 million, with \$51 million for capital and \$13.3 million for support. It is proposed that 100% of the project cost be funded from the TCIF/State Highway Operation and Protection Program (SHOPP)

All \$\$s in millions

Project	Total project cost	TCIF request	Identified matching funds	Match source	TCIF/ SHOPP	Other funding	Source
I-580 Eastbound Truck Climbing Lane	\$64.3	\$0			\$64.3	\$0	

### **2. Deliverability:**

The I-580 EB TCL is scheduled to begin construction prior to the Trade Corridors Improvement Fund screening criteria construction start date of December 31, 2013. A summary of the project schedule is listed in the Project Programming Request Form.

A Preliminary Environmental Analysis Report (PEAR) has been prepared for the project. The PEAR is an important part of the PSR. It provides the initial environmental evaluation of a project and all feasible alternatives before it is programmed. Because the environmental process can have a substantial impact on the project alternatives, design, costs, schedule, and delivery, the PEAR presents and discusses the results of preliminary environmental studies in order to identify environmental constraints that may affect design. The PEAR also estimates the scope, schedule, and costs associated with completing environmental compliance. The information contained in the PEAR serves as the foundation for the environmental team to begin studies in the Project Report (PR) phase, facilitating early consultation with Federal and State resource agencies.

Since none of the three proposed build alternatives require new right of way, and the alternatives differ only in the North Flynn Road on-ramp, the selection of any one of the proposed alternatives is not anticipated to significantly change the project scope or impacts. Hence, the PEAR applies to all three

alternatives except for North Flynn Road. Potential schedule risks to the project include consultation on permits and timing biological surveys to seasonality.

It is anticipated that this project will result in an Initial Study/Negative Declaration under CEQA and an Environmental Assessment with a Finding of No Significant Impact under NEPA. Biological and cultural resources affected may require more extensive investigation. Permits that may be necessary include: Clean Water Act Section 401 Water Quality Certification (RWQCB), Clean Water Act 404 Nationwide Permit (USACOE) and Sections 1601-1603 (Lake and Streambed Alteration Agreement) of the California Fish and Game (CDFG) Code. More information on known risks that could impact project delivery is detailed in **Attachment 1** (Risk Management Plan).

### **3. Economic/Jobs Growth:**

Three key elements of Bay Area Goods Movement include international trade, domestic trade and local distribution. These three markets create large amounts of demand for services to deliver goods from their origin to their final destination. Figures from 2002 indicate that \$79.6 billion worth of international trade merchandise was moved through the San Francisco Customs District. The Port of Oakland, the region's leading seaport and the fourth largest container port in the United States (20<sup>th</sup> in the world), is unique among West Coast ports in that export container volumes are approximately equal to import container volumes. At the same time air cargo was valued at \$26 billion, an increase of \$11.3 billion from ten years earlier. These facts highlight the critical role the port plays in the U.S. economy as well as providing an outlet to markets for California businesses and points beyond. While more than 80% of the Goods Movement in the Bay Area involves trucking in several major corridors, the I-580 Corridor is considered the primary trucking connection between the Bay Area and the national Interstate truck network.

A substantial share of the Bay Area domestic trade is with Southern California, the San Joaquin Valley and other West Coast destinations. Trucking carries the largest share of domestic trade in terms of both tonnage and value. Domestic trade outside of the Bay Area comprises 54% of tonnage and 74% of all inland trade involving the nine Bay Area counties. These domestic trading regions rely on the I-580 Corridor as a key connecting route. The I-580 Corridor experiences the second-highest volume of truck traffic in the Bay region, most of it long-haul in nature and involving the heaviest trucks. Combined with increasing development of regional distribution centers located in the San Joaquin Valley, trucks traveling between these regions use the I-580 Corridor as a primary route.

Local distribution and service activity comprises the third component of the Bay Area Goods Movement economy in terms of tons moved, value of products, and traffic impacts on the region's roadways. It is estimated that 46% of all the tonnage moved in the Bay Area is transported entirely within the nine-county region. The major activities that generate this freight movement include warehouse and distribution activity, movement of construction materials to support the growing housing and commercial real estate markets of Northern California, and local parcel and courier services. Traffic from service vehicles also generates a significant amount of local Goods Movement activity.

The I-580 Corridor is an important conduit between more affordable housing in eastern Contra Costa and San Joaquin Counties and major employment centers in the Tri-Valley area, Silicon Valley in the South Bay, and the Peninsula. By virtue of its potential to decrease existing and future congestion, this project is expected to facilitate access to jobs, housing markets, and commerce in and around the Bay Area. At the Bay Area's eastern border adjacent to San Joaquin County, the route splits into two, one continuing southeastward as I-580 and another going eastward as SR-205, both terminating at I-5. Within the Bay Area, the corridor provides direct connections to the East Bay's three major north-south freeways: I-880,

the north-south segment of I-580, and I-680. The route serves as a major gateway for Goods Movement into and out of the Bay Area's five seaports, three commercial airports, and four rail freight terminals.

#### 4. Air Quality:

##### 1. Does the project provide a regional air quality benefit?

The nine-county region is part of the San Francisco Bay Area Air Quality Basin. The region currently meets the national attainment standards for carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), and lead. The area has been designated a marginal nonattainment area for ozone based on current federal standards. Additionally, the region does not meet the current State standards for ozone, PM<sub>10</sub> and PM<sub>2.5</sub>, but is in attainment for the other pollutants listed above. A number of violations of the federal ozone air quality standards in the Bay Area are detected at the Livermore monitoring station, because the area is downwind of major industrial areas and freeways and it is bounded by the Altamont Pass. By reducing cold starts, stops, and idling, the project is expected to result in significant reductions in both ozone precursors and particulate matter, both of which are heavily produced by diesel trucks. This objective is consistent with the region's air quality attainment goals.

The table below shows projected emission reductions for both NO<sub>x</sub> and PM<sub>10</sub> pollutants. While the data displayed reflects projected (Year 2035) PM peak hour (approximately 4.5 hours) emission reduction totals for both project build and no-build scenarios, the table does not highlight benefits that may be achieved off-peak and during interim years when freeway operating conditions are more favorable. Additional data including the assumptions made to develop this data are included in **Attachment 2**.

<b>Year 2035 PM Peak Hour</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>
<b>With I-580 EB TCL Project</b>	<b>31.20 pounds/day</b>	<b>2.54 pounds/day</b>
	14,150.61 grams/day	1,153.74 grams/day
<b>Without I-580 EB TCL Project</b>	<b>32.62 pounds/day</b>	<b>2.81 pounds/day</b>
	14,797.05 grams/day	1,273.12 grams/day
<b>Reduction</b>	<b>1.42 pounds/day</b>	<b>0.27 pounds/day</b>

In February, 2005, MTC adopted the 25-year Regional Transportation Plan (RTP). The air quality conformity analysis of the Plan resulted in a favorable air quality conformity determination by the Federal Highway Administration (FHWA) on MTC's RTP for achieving and maintaining national ambient air quality standards. This project is included in the current RTP and in the air quality conformity analysis, and is therefore part of a conforming regional transportation plan.

In 2006 Assembly Bill 32 (Global Warming Solutions Act) was passed. This bill seeks to reduce California's global warming emissions to 1990 levels by Year 2020. Starting in 2012, the reduction will be accomplished through an enforceable and phased statewide cap on Green House Gas (GHG) emissions. In order to effectively implement this cap, AB 32 directs the California Air Resources Board (CARB) to develop appropriate regulations and establish a mandatory reporting system to track and monitor global warming emissions levels. The Department will partner with CARB and other regional air quality

management agencies to assist in developing methods to improve GHG emissions on both regional and statewide levels.

**2. Does the project increase the expected future level of polluting activity in specific neighborhoods or communities?**

The I-580 EB TCL Project proposes to separate traffic weaving movements from the freeway mainline and facilitate both regional and interregional movement of goods between the Port of Oakland and the San Joaquin Valley as well reduce vehicular emissions by allowing traffic speeds to increase and remain stable, resulting in more favorable air quality benefits. While the majority of the truck trips in the corridor are interregional in nature, the project is not expected to generate more regional truck trips and will improve the operations of both mainline I-580 and local on-ramps within the project area. As a result of this project being implemented, local freeway on-ramps may see an operational benefit as conditions on the freeway mainline improve.

**3. Does project design avoid or mitigate any emission increases resulting from the increased activity?**

Emission increases are not expected. However, while the project will improve congestion and overall velocity, any increases in activity within the corridor would be analyzed and mitigated during the National Environmental Policy Act (NEPA) / California Environmental Quality Act (CEQA) review later in the project development process. As conditions on the freeway mainline improve, local and regional emissions may also see an improvement.

**4. Does a screening assessment show localized impacts?**

Starting in January 2008, new truck classification and operational studies will be conducted and utilized in an Emissions FACtor (EMFAC) model to determine levels of pollutant output activity and localized air quality benefits. The EMFAC modeling analysis will also determine whether the I-580 EB TCL may qualify for funding under the Congestion Mitigation and Air Quality (CMAQ) Improvement Program. This analysis is scheduled to be completed in July 2008. While the analysis is being conducted the Department plans to develop an on-going dialogue with MTC and FHWA concerning this proposed project.

**5. Are there mitigation opportunities in the impacted area?**

Not applicable, however during the National Environmental Policy Act (NEPA) / California Environmental Quality Act (CEQA) review later in the project development process potential mitigation opportunities will be identified.

**B) Evaluation Criteria:** Evaluation criteria are grouped into three categories.

**1. Freight System Factors:**

- **Throughput:** Project provides for increased volume of freight traffic through capacity expansion or operational efficiency.
- **Velocity:** Project increases the speed of freight traffic moving through the distribution system.
- **Reliability:** Project reduces the variability and unpredictability of travel time.

In 2005, the I-580 corridor daily traffic volume was 211,000 vehicles per day with trucks accounting for 12 percent of the total traffic. Two segments along the corridor have been in the top five most congested

freeway locations in the Bay Area since 2002, experiencing three-hour long weekday and morning peak period congestion in the westbound direction and four-hour long weekday afternoon peak period congestion in the eastbound direction. While there are severely congested locations during the weekday peak commute periods, traffic is generally heavy in both directions from 6 AM to 8 PM.

For the EB I-580 TCL the Department has provided existing traffic (Year 2007) and forecasted (Year 2035) traffic volumes. From this data the Department analyzed existing and future traffic conditions associated with the build and no-build alternatives for the proposed project between the Greenville Road undercrossing and one-mile east of North Flynn Road. A summary table of existing and forecasted eastbound I-580 PM peak hour volumes is shown in **Attachment 3**.

Eastbound I-580, between the First Street interchange in Livermore and the connector to I-205/580 is generally 4-lanes wide. There are auxiliary lanes on this section of freeway, between the Vasco Road on-ramp and the Truck Scales, and between the truck scales and the Greenville Road off-ramp. Continuing eastbound, a 5-lane section begins at Grant Line Road and continues to the I-205/580 interchange. There is an uphill grade eastbound between the Greenville Road and North Flynn Road interchanges. At the North Flynn Road interchange this becomes a downhill five percent grade.

The current proposed project provides a TCL on eastbound I-580, from the Greenville Road interchange to east of the North Flynn Road interchange. It is understood that the truck climbing lane will start at such a location that the roadway will have a continuous five-lane freeway section that will continue from the four mixed-flow lanes and one HOV lane which is expected to be in place west of the Greenville Road interchange.

#### Existing Traffic Conditions – AM Peak Period

From First Street to the I-205/580 interchange, the eastbound I-580 freeway is generally uncongested in all lanes, with the exception of fully loaded trucks in lanes # 3 and 4. From approximately 0.5 miles east of the Greenville Road on-ramp to the North Flynn Road off-ramp, truck speeds are reduced due to the uphill grade of the roadway. Sample truck speeds collected in October/November 2007 suggest that the average truck speed is approximately 52 mph in lane #3 (samples ranged from 37 to 60 mph) and 48 mph in lane #4 (samples ranged from 35 to 60 mph) on the uphill grade.

#### Existing Traffic Conditions – PM Peak Period

Several bottlenecks develop during this period between the First Street interchange and the I-205/580 interchange and are caused by heavy traffic getting off and on at Vasco Road as well as the vertical curve that starts at the Greenville Road interchange. During the peak hour this congested segment is approximately 1.3 miles long, from west of Vasco Road to about 0.5 miles east of the Greenville Road on-ramp. All four lanes are congested and field observations indicate that lanes #1 and #2 are used by mixed-flow traffic while trucks generally remain in lanes #3 and #4, with slower trucks in lane #4. The average speed of the trucks in the #3 and #4 lanes between the Greenville Road on-ramp and North Flynn Road off-ramp is approximately 48 mph (samples ranged from 21 to 65 mph) and 41 mph (samples ranged from 15 to 51 mph), respectively. A minor intermittent problem on the #4 lane in the vicinity of the North Flynn Road interchange is caused by slow trucks merging into mainline traffic from the North Flynn Road on-ramp. Within this segment mainline truck volumes account for approximately 12.4 percent of total traffic (75.5% 5-Axle trucks).

#### Future Traffic Operations

Caltrans has provided projected year 2035 PM peak hour traffic forecast volumes on eastbound I-580, from west of the Greenville interchange to east of the North Flynn Road interchange, plus on and off-ramp volumes for the ramps at the Greenville Road and North Flynn Road interchanges. A comparison of existing and forecast traffic volumes shows that a substantial increase (61 – 66%) in traffic demand is expected on this section of eastbound I-580 by 2035 while ramp traffic volumes are forecast to double. Eastbound I-580 cannot accommodate these forecast demand volumes, and it is likely that PM peak hour traffic congestion could last for 4 to 5 hours, with individual vehicle delays as high as 30 to 45 minutes. Constrained peak hour forecasted volume for this section of freeway is approximately 11,600, and the capacity of this section is approximately 9100 – 9200 (including about 1000 trucks). Likely traffic speeds

on this section of freeway would probably be on the order of 35 to 50 mph for all vehicles. On the section of freeway between Greenville Road and North Flynn Road interchanges, traffic will be congested by vehicle back-ups and it is estimated that vehicle speeds would be on the order of 20 to 25 mph.

Analysis of year 2035 traffic forecasts indicate that if no improvements are made, Eastbound I-580 will experience substantial traffic congestion and vehicle delays upstream of a traffic bottleneck that already exists on the freeway upgrade between the Greenville Road and North Flynn Road interchanges. If the proposed truck climbing lane is provided, the existing bottleneck will be eliminated. Given the very high demand traffic volumes in 2035, it is not anticipated that the period of traffic congestion would be reduced. However, the addition of the truck climbing lane could reduce the duration of the peak period by approximately 30 minutes. Furthermore, during off-peak periods there will be an additional lane for autos to use in passing slow trucks, thereby reducing the travel time for some motorists.

The overall operational benefit of this project will enhance Goods Movement along eastbound I-580 between the San Francisco Bay Area and the Central Valley by separating truck traffic from mixed flow traffic over the Altamont Pass. The project will improve freeway safety and operations, relieve traffic congestion and delay during the PM peak period by separating slow-moving truck traffic from the existing mixed-flow traffic lanes.

## 2. Transportation System Factors:

- **Safety:** Project increases the safety of the public, industry workers, and traffic.

The Department has provided three-year (August 1, 2003 to July 31, 2006) safety and traffic accident data for both eastbound I-580 mainline and on and off-ramps. Although the actual fatality accident rate for the mainline within the project limits is slightly lower than the statewide average, the actual total accident rate is about two times higher than the statewide average. It is presumed that the addition of an eastbound truck climbing lane will reduce accidents by separating slow-moving truck traffic from existing mixed-flow lanes and facilitate traffic weaving movements from the mainline resulting in more favorable traffic safety conditions. A summary of TASAS accident rate data for both eastbound I-580 mainline and on and off-ramps is shown in **Attachment 4**.

- **Congestion Reduction/Mitigation:** Project reduces daily hours of delay on the system and improves access to freight facilities.

The addition of the I-580 EB TCL will reduce the duration of the peak period by 30 minutes allowing autos to pass slow moving trucks thereby reducing travel times and, with the increased carrying capacity of the roadway, will improve access to regional and interregional freight facilities.

- **Key Transportation Bottleneck Relief:** Project relieves key freight system bottlenecks where forecasts of freight traffic growth rates indicate infrastructure or system needs are inadequate to meet demand.

Analysis of Year 2035 traffic forecasts indicates that if no improvements are made, eastbound I-580 will experience substantial traffic congestion and vehicle delays upstream of a traffic bottleneck that already exists on the freeway gradient between the Greenville Road Undercrossing and east of the North Flynn Road interchange. In this segment, during times of peak demand and due to an uphill grade of approximately 3 to 4%, truck speeds can be significantly reduced. If the proposed truck lane is provided, the existing bottleneck will be eliminated giving trucks an additional lane to climb the grade and allowing autos to pass the slower moving trucks.

- **Multi-modal Strategy:** Project employs or supports multi-modal strategies to increase port and transportation system throughput while reducing truck vehicle miles/hour traveled (VMT/VHT).

Trucking continues to be relied upon as the major mode for transporting international, domestic and local goods and services within this corridor. The I-580 EB TCL will continue eastward where the Corridor Mobility Improvement Account funded I-580 EB HOV lane (Hacienda Boulevard to Greenville Road) will

end. The project supports multi-modal strategies to increase Port and transportation system throughput by easing traffic weaving movements and allowing for express buses and carpools to maintain travel time savings by passing slow moving trucks as they continue eastward up the Altamont grade.

- **Interregional Benefits:** Project links regions/corridors to serve statewide or national trade corridor needs.

The I-580 Corridor serves as the major interregional corridor and truck route between the Port of Oakland and Interstate 5 in the Central Valley as well as a major route serving the Tri-Valley area. It provides for the movement of goods, services and people in and out of the Bay Area Region. The I-580 EB TCL will enhance this connection and allow for shorter and more reliable travel times for freight related traffic.

### 3. Community Impact Factors:

- **Air Quality Impact:** Project reduces local and regional emissions of diesel particulate, CO<sub>2</sub>, NO<sub>x</sub>, and other pollutants.

See answer above under Screening Criteria 4.

The I-580 EB TCL Project proposes to separate traffic weaving movements from the freeway mainline and facilitate local, regional and interregional movement of goods between the Port of Oakland and the San Joaquin Valley as well as reduce vehicular emissions by allowing traffic speeds to increase and remain stable, resulting in more favorable air quality benefits. This project is not expected to generate more local truck trips but will improve the operations of both mainline I-580 and local on-ramps within the project area. As a result of this project being implemented, local and regional emissions will see an improvement as conditions on the freeway mainline improve.

- **Community Impact Mitigation:** Project reduces negative impacts on communities

The I-580 EB TCL from Greenville Road to North Flynn Road (Altamont Summit) will improve safety and operations, relieve congestion, reduce recurrent traffic congestion and delay as well as enhance the movement of goods between the San Francisco Bay Area and the Central Valley. The project is not expected to generate more local truck trips and will improve the operations of both mainline I-580 and local on-ramps within the project area. As a result of this project being implemented, local freeway on-ramps may see an operational benefit as congested conditions on the freeway mainline improve. Air quality improvements resulting from the project will benefit the communities surrounding the project area.

- **Economic/Jobs Growth:** Project stimulates local economic activity, enhances trade value, and preserves/creates jobs.

The I-580 EB TCL will support local, regional and interregional economic and employment activity by improving the movement of goods between their origin and destination. This corridor and proposed project directly serves the East Bay, Tri-Valley and Central Valley regions which are major centers for warehousing and distribution as well as industrial and manufacturing businesses. In order to be competitive, particularly for trucking movements, these businesses rely on an efficient and reliable transportation network. The project enhances the speed in which cargo can be delivered, resulting in faster and more reliable travel times for international and domestic trade commodities as well as for local goods and services.



# Attachment 1 – Risk Management Plan

04-ALA-380-PM 4.98.2: EA 4A070K: Eastbound Truck-Climbing Lane

Identification				Qualitative Analysis										Response Strategy			Monitoring and Control			
Priority	Risk ID	Status	Category	Core Sampling Method / Phase	Identified Risk (Initial Risk Rating)	Additional Supporting Facts About the Risk / Root Causes	Risk Trigger	Probability	Type	Estimated Impact	Evaluated Impact	LINEAR Risk Matrix	NON-LINEAR Risk Matrix	Quantitative (Optional)	Strategy	Response Actions including advantages and disadvantages	WBS Tasks Affected	Risk Owner / Function	Status Interval / Review Check	Changes and Comments made to this log
1	(1) (2) (4) (5)	En	En	Phase 1 Date Risk Mtd 12/12/2007 Phase 1																

## Attachment 2

<u>I - 580 Eastbound Truck Climbing Lane</u>							
	Pk Hr VMT >>	36,526	4,563				
		41,088.96					
	Speed Improvement						
	assumed forecasted PM peak hour traffic congestion = 4.5 hours [average] = 270 minutes						
	build project improvement scenario: 270 - 30 = 240 minutes or 30 / 270 = <b>11.11%</b> improvement in speed to be assumed						
	assumed speed = 22.5 mph [average]						
	build project speed = <b>25.00</b> mph						
Speed MPH	Pollutant Name: Oxides of Nitrogen						
	Non-Trucks	Trucks					
	<b>0.59383</b>	<b>98.22289</b>					
<b>5</b>	<b>0.15913</b>	<b>5.16039</b>	24hr ADT Length	12451.2 3.3			
<b>10</b>	<b>0.13655</b>	<b>3.91105</b>	Total VMT	41088.96	peak	100.0%	
<b>15</b>	<b>0.12015</b>	<b>3.03446</b>					
<b>20</b>	<b>0.10832</b>	<b>2.52790</b>					
<b>22</b>	<b>0.10530</b>	<b>2.42965</b>					
<b>22.5</b>	<b>0.10442</b>	<b>2.40684</b>					
<b>23</b>	<b>0.10354</b>	<b>2.38403</b>					
<b>25</b>	<b>0.10037</b>	<b>2.29763</b>					
<b>30</b>	<b>0.09481</b>	<b>2.11514</b>	VMT %age				
<b>35</b>	<b>0.09184</b>	<b>1.97815</b>	Non-Trucks	88.89%	36525.72		
<b>40</b>	<b>0.09021</b>	<b>1.88703</b>	Trucks	11.11%	4563.24		
<b>42</b>	<b>0.09059</b>	<b>1.86297</b>					
<b>43</b>	<b>0.09074</b>	<b>1.85437</b>					
<b>45</b>	<b>0.09100</b>	<b>1.84217</b>					
<b>50</b>	<b>0.09399</b>	<b>1.84663</b>			41088.96		
<b>55</b>	<b>0.09987</b>	<b>1.90562</b>					
<b>60</b>	<b>0.10918</b>	<b>2.02671</b>				NOx	PM10
<b>65</b>	<b>0.12205</b>	<b>2.22300</b>					
				w/o project peak	14797.05 grams/day		1273.12 grams/day
					32.62 pounds/day		2.81 pounds/day
Speed MPH	Pollutant Name: PM10						
	Non-Trucks	Trucks		w/project peak	14150.61 grams/day		1153.74 grams/day
<b>0</b>	<b>0.00635</b>	<b>0.39790</b>					
<b>5</b>	<b>0.07932</b>	<b>0.18842</b>			31.20 pounds/day		2.54 pounds/day
<b>10</b>	<b>0.05180</b>	<b>0.15211</b>					
<b>15</b>	<b>0.03559</b>	<b>0.12477</b>					
<b>20</b>	<b>0.02589</b>	<b>0.10512</b>					
<b>22</b>	<b>0.02322</b>	<b>0.10005</b>					
<b>22.5</b>	<b>0.02248</b>	<b>0.09910</b>					
<b>23</b>	<b>0.02173</b>	<b>0.09814</b>					
<b>25</b>	<b>0.01991</b>	<b>0.09346</b>					
<b>30</b>	<b>0.01573</b>	<b>0.08695</b>					
<b>35</b>	<b>0.01368</b>	<b>0.08383</b>					
<b>40</b>	<b>0.01207</b>	<b>0.08409</b>					
<b>42</b>	<b>0.01141</b>	<b>0.08479</b>					
<b>43</b>	<b>0.01140</b>	<b>0.08526</b>					
<b>45</b>	<b>0.01118</b>	<b>0.08696</b>					
<b>50</b>	<b>0.01113</b>	<b>0.09307</b>					
<b>55</b>	<b>0.01140</b>	<b>0.10180</b>					
<b>60</b>	<b>0.01265</b>	<b>0.11314</b>					
<b>65</b>	<b>0.01490</b>	<b>0.12734</b>					

**Attachment 3 – Eastbound I-580 PM peak hour traffic volumes**

EB I-580 PM Peak Hour Traffic Volumes	COUNTS						2035 FORECAST					
	ALL VEHICLES	TRUCKS					ALL VEHICLES	TRUCKS				
	Cars + Trucks	Total Trucks	2- Axle	3- Axle	4- Axle	5- Axle	Cars + Trucks	Total Trucks	2- Axle	3- Axle	4- Axle	5- Axle
EB I-580 mainline West of Greenville	7506	901	148	37	25	691	12310	1360	224	55	38	1043
EB Off to Greenville	530	22	13	2	2	5	1060	64	38	6	6	14
EB I-580 mainline	6976	879	135	35	23	686	11250	1296	186	50	32	1028
EB On from Greenville	927	84	54	5	0	25	1854	168	108	10	0	50
EB I-580 Mainline	7093	963	189	40	23	711	13104	1464	294	60	32	1078
EB Off to Flynn	315	48	23	1	1	23	630	96	46	2	2	46
EB I-580 Mainline	7588	915	166	39	22	688	12474	1368	248	58	30	1032
EB On from Flynn	322	29	11	4	3	11	644	58	22	8	6	22
EB I-580 Mainline	7910	944	177	43	25	699	13118	1426	270	66	36	1054

## Attachment 4 – TASAS Accident Rate Data

### Eastbound I-580 Mainline

Location	Number of Accidents / Significance							Accident Rate (accidents/million vehicles)					
								Actual			Average		
	Total	Fatalities	Injuries	F+I	Multi Veh	Wet	Dark	Fatalities	F+I	Total	Fatalities	F+I	Total
PM 5.6 and 6.0	48	0	21	21	34	3	17	0.000	0.65	1.49	0.007	0.17	0.45
PM 6.1 and 9.0	124	1	43	44	101	13	35	0.004	0.19	0.53	0.009	0.28	0.78
<b>Total</b>	172	1	64	65	135	16	52	0.004	0.84	2.02	0.016	0.45	1.23

### Eastbound I-580 On & Off-Ramps

Location	Number of Accidents / Significance							Accident Rate (accidents/million vehicles)					
								Actual			Average		
	Total	Fatalities	Injuries	F+I	Multi Veh	Wet	Dark	Fatalities	F+I	Total	Fatalities	F+I	Total
Greenville Rd Off-ramp	2	0	1	1	1	0	0	0.000	0.29	0.58	0.005	0.39	1.15
Greenville Rd On-ramp	0	0	0	0	0	0	0	0.000	0.00	0.00	0.002	0.20	0.60
North Flynn Rd Off-ramp	1	0	0	0	0	0	0	0.000	0.00	0.88	0.013	0.67	1.90
North Flynn Rd On-ramp	0	0	0	0	0	0	0	0.000	0.00	0.00	0.004	0.21	0.60
<b>Total</b>	3	0	1	1	1	0	0	0.000	0.29	1.46	0.024	1.47	4.25

Source: California Department of Transportation Traffic Accident Surveillance and Analysis System (TASAS)

I-580 Operational Improvement Project  
(Eastbound Truck-Climbing Lane)

EA 4A070K  
04-ALA-580  
PM 4.9/8.2

**PROJECT COST ESTIMATES**

**ALTERNATIVE #3: CURRENT & ESCALATED CAPITAL & SUPPORT COSTS**

ALTERNATIVE #3 Project Cost Component	FY 2007/08	FY 2008/09	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	Total Project Escalated Cost	Total Project Cost Estimate (Alt. #3) Current Value
Environmental Support (PA/ED)		\$2,490,000							\$2,490,000	\$2,370,000
Design Support (PS&E)				\$5,140,000					\$5,140,000	\$4,440,000
R/W Support					\$100,000				\$100,000	\$100,000
Construction Support						\$5,530,000			\$5,530,000	\$4,330,000
R/W Capital					\$5,000				\$5,000	\$5,000
CON Capital						\$51,000,000			\$51,000,000	\$39,960,000
<b>TOTAL</b>		\$2,490,000		\$5,140,000	\$105,000	\$56,530,000			\$64,270,000	\$51,210,000

Note: Capital Costs and Support Costs (Except R/W Capital) are escalated at a rate of 5% per year.

**PRELIMINARY PROJECT COST ESTIMATE SUMMARY**

DIST-CO-RTE: 04-ALA-580

PM 4.9/8.2

EA: 4A070K

**Project Description:** Truck-climbing lane

**Limits:** On eastbound State Route 580 between North Flynn Road and Greenville Road

**Proposed Improvement (Scope):** To widen existing eastbound I-580, excluding structures, to construct a truck-climbing lane

**TOTAL ROADWAY ITEMS** \$ 39,957,000

**TOTAL STRUCTURE ITEMS** \$ 0

***SUBTOTAL CONSTRUCTION COSTS*** \$ 39,957,000

**TOTAL RIGHT OF WAY ITEMS** \$ 5,000

**TOTAL PROJECT CAPITAL OUTLAY COSTS** \$ 39,962,000

Approved By:  
Project Manager:

Signature: \_\_\_\_\_  
Issa Bouri

Date: \_\_\_\_\_

**PRELIMINARY PROJECT COST ESTIMATE SUMMARY**

**DIST-CO-RTE: 04-ALA-580**

**PM 4.9/8.2**

**EA: 4A070K**

**I. ROADWAY ITEMS**

**Section 1 - Earthwork**

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	<u>182000</u>	<u>CY</u>	<u>\$ 18</u>	<u>\$ 3,276,000</u>	
Contaminated Soil Disposal (assume 2' deep)	<u>13240</u>	<u>CY</u>	<u>\$ 250</u>	<u>\$ 3,310,000</u>	
Clearing & Grubbing	<u>1</u>	<u>LS</u>	<u>\$ 200,000</u>	<u>\$ 200,000</u>	
Develop Water Supply	<u>1</u>	<u>LS</u>	<u>\$ 200,000</u>	<u>\$ 200,000</u>	
<b><i>*Total Earthwork</i></b>					<b><u>\$ 6,986,000</u></b>

\* This estimated earthwork cost includes all other related items - For planning stage

**Section 2 - Pavement Structural Section**

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Asphalt Concrete, AC (Type A)	<u>26960</u>	<u>TON</u>	<u>\$ 90</u>	<u>\$ 2,426,400</u>	
Lean Concrete Base, LCB	<u>14550</u>	<u>CY</u>	<u>\$ 130</u>	<u>\$ 1,891,500</u>	
Aggregate Sub-Base, AS (Class 4)	<u>32800</u>	<u>CY</u>	<u>\$ 35</u>	<u>\$ 1,148,000</u>	
<b><i>**Subtotal Pavement Structural Items</i></b>					<b><u>\$ 5,465,900</u></b>

**Section 3 - Drainage**

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Drainage Cost	<u>1</u>	<u>LS</u>	<u>\$ 1,000,000</u>	<u>\$ 1,000,000</u>	
<b><i>***Total Drainage (Lump Sum)</i></b>					<b><u>\$ 1,000,000</u></b>

For Planning purposes lump sum amounts provided by Hydraulics Department

**PRELIMINARY PROJECT COST ESTIMATE SUMMARY**

**DIST-CO-RTE: 04-ALA-580**

**PM 4.9/8.2**

**EA: 4A070K**

**Section 4- Specialty Items**

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Structural Concrete (Retaining Wall)	<u>10230</u>	<u>CY</u>	\$ <u>500</u>	\$ <u>5,115,000</u>	
Bar Reinforcing Steel (Retaining Wall)	<u>801190</u>	<u>LB</u>	\$ <u>1.5</u>	\$ <u>1,201,785</u>	
Concrete Barrier Type 25 (Retaining Wall)	<u>5550</u>	<u>LF</u>	\$ <u>40</u>	\$ <u>222,000</u>	
Relocate Call Box	<u>12</u>	<u>EA</u>	\$ <u>250</u>	\$ <u>3,000</u>	
Remove Chainlink Fence	<u>1530</u>	<u>LF</u>	\$ <u>10</u>	\$ <u>15,300</u>	
Resident Engineer Office	<u>1</u>	<u>LS</u>	\$ <u>200,000</u>	\$ <u>200,000</u>	
Temporary Traffic Stripe (Paint)	<u>17570</u>	<u>LF</u>	\$ <u>1</u>	\$ <u>17,570</u>	
Temporary Railing (Type K)	<u>17120</u>	<u>LF</u>	\$ <u>12</u>	\$ <u>205,440</u>	
Paint Traffic Stripe (2-coat)	<u>46190</u>	<u>LF</u>	\$ <u>1</u>	\$ <u>46,190</u>	
Planting and Irrigation w/ 3 yrs. PEW	<u>1</u>	<u>LS</u>	\$ <u>100,000</u>	\$ <u>100,000</u>	
Signal, Lighting and Sign Illumination	<u>1</u>	<u>LS</u>	\$ <u>25,000</u>	\$ <u>25,000</u>	
Design Pollution Prevention BMPs	<u>1</u>	<u>LS</u>	\$ <u>193,200</u>	\$ <u>193,200</u>	
Treatment Best Management Practices (BMPs)	<u>1</u>	<u>LS</u>	\$ <u>515,200</u>	\$ <u>515,200</u>	
Construction Site BMPs	<u>1</u>	<u>LS</u>	\$ <u>201,250</u>	\$ <u>201,250</u>	
Temporary Construction Site Water Pollution Control	<u>1</u>	<u>LS</u>	\$ <u>503,000</u>	\$ <u>503,000</u>	
Prepare Storm Water Pollution Prevention Plan (SWPPP)	<u>1</u>	<u>LS</u>	\$ <u>10,000</u>	\$ <u>10,000</u>	
Environmental Mitigation	<u>1</u>	<u>LS</u>	\$ <u>2,160,000</u>	\$ <u>2,160,000</u>	
Ramp Metering System	<u>2</u>	<u>EA</u>	\$ <u>50,000</u>	\$ <u>100,000</u>	

***Total Specialty Items* \$ 10,833,935**



## ALTERNATIVE 3

### PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST-CO-RTE: 04-ALA-580

PM 4.9/8.2

EA: 4A070K

#### Section 5 - Traffic Items

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Relocate Light Pole (Luminaire)	<u>2</u>	<u>EA</u>	<u>\$ 25,000</u>	<u>\$ 50,000</u>	
Reconstruct OH Signs & Structures	<u>2</u>	<u>EA</u>	<u>\$ 50,000</u>	<u>\$ 100,000</u>	
Transportation Management Plan (TMP)	<u>1</u>	<u>LS</u>	<u>\$ 465,000</u>	<u>\$ 465,000</u>	
Roadside signs	<u>1</u>	<u>LS</u>	<u>\$ 100,000</u>	<u>\$ 100,000</u>	
Mainline traffic monitoring station	<u>1</u>	<u>LS</u>	<u>\$ 50,000</u>	<u>\$ 50,000</u>	

*Total Traffic Items* \$ 765,000

**TOTAL SECTIONS 1-5** \$ 25,050,835

Use \$ 25,051,000

#### Section 6 - Minor Items

		Unit Cost	Section Cost
Subtotal Section 1-5	\$ 25,051,000	x 10% =	<u>\$ 2,505,100</u>

*Total Minor Items* \$ 2,505,100

#### Section 7 - Roadway Mobilization

Subtotal Section (1-5)	\$ 25,051,000		
Minor Items (6)	\$ 2,505,100		
Sum (1-6)	<u>\$ 27,556,100</u>	x 10% =	<u>\$ 2,755,610</u>

*Total Roadway Mobilization* \$ 2,755,610

#### Section 8 - Roadway Additions

##### *Supplemental Work*

Subtotal Sections (1-5)	\$ 25,051,000		
Minor Items (6)	\$ 2,505,100		
Sum (1-6)	<u>\$ 27,556,100</u>	x 10% =	<u>\$ 2,755,610</u>

##### *Contingencies*

Subtotal Sections 1-5	\$ 25,051,000		
Minor Items (6)	\$ 2,505,100		
Sum	<u>\$ 27,556,100</u>	x 25% =	<u>\$ 6,889,025</u>

*Total Roadway Additions* \$ 9,645,000

**TOTAL ROADWAY ITEMS (Total of Sections 1-8)** **\$ 39,957,000**

Estimate Prepared by:  
Project Engineer

Signature: \_\_\_\_\_  
Jonathan Dang

Date: \_\_\_\_\_

**PRELIMINARY PROJECT COST ESTIMATE SUMMARY**

**DIST-CO-RTE: 04-ALA-580**

**PM 4.9/8.2**

**EA: 4A070K**

**II. STRUCTURES ITEMS**

	Unit	Cost			
		Structure 1	Structure 2	Structure 3	Structure 4
Tie-Back Wall		<u>Greenville OH</u>	<u>Greenville Rd UC</u>		
Structure Type		RC BOX	RC BOX		
Structure Widening	LS	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Concrete Removal	CY	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Reinforced Concrete	CY	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Shotcrete	CY	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Tiebacks	CY	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Structure Replacement	LS	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<i>Total Cost Per Structure</i>		<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

\* - Includes 10% mobilization and 25% contingency

Subtotal Structures Items \$0

Railroad Related Costs \$0

Subtotal Railroad Items \$0

**\*TOTAL STRUCTURES ITEMS -** **\$ 0**  
 (Sum of Structures plus Railroad Items)

Comments:

\* This amount is the total cost of structures including 10% mobilization and 25% contingency.

**PRELIMINARY PROJECT COST ESTIMATE SUMMARY**

**DIST-CO-RTE: 04-ALA-580**

**PM 4.9/8.2**

**EA: 4A070K**

**III. RIGHT OF WAY ITEMS**

	Current Values (Future Use)	Escalation Rates	Escalated Values
Utility Relocation (State Share)	\$ 5,000		\$ 5,000
Title and Escrow Fees	\$ 0		\$ 0
Acquisition, including Execss Lands	\$ 0		\$ 0
<b>TOTAL RIGHT OF WAY</b>	<b>\$ 5,000</b>		<b>\$ 5,000</b>